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ADDRESS.

THE MUTUAL RELATIONS OF THE MEDICAL PROFESSION AND THE PUBLIC.

President's Address Forty-sixth Annual Meeting of the Illinois State Medical Society, delivered before the Members of the Society and the Citizens of Ottawa, evening of May 19, 1896.

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CHICAGO.

The Illinois State Medical Society requires of its presiding officer each year an address on some subject of his own choosing, the members of the Society for the most part constituting the audience. But to some extent the nature of the subject and the character of the audience for this evening have been determined by the circumstances under which this meeting is held, and the plans of the committee of arrangements.

The reciprocal relations and duties of the medical profession and the community is, as a theme, like an old jewel which requires an occasional resetting to bring it into harmony with the changes of time and circumstance.

While some of these relations and duties are always and everywhere the same, the subject still requires frequent restatement, both because of its perennial interest to the profession and the public at large, and also because in the progressive community the mutual relations of the various interests, occupations and component parts of that community are constantly undergoing change and requiring readjustment.

In a limited sense each individual member of the modern industrial community is pursuing that course and conduct of life which he chooses for himself so far as he is not prevented from doing so by the natural limitations of his own powers of mind and body, by his environment, and by the presence and plans of others. Every individual thus becomes a competitor or antagonist of every other within his own sphere of action in the struggle for existence and advantage. The rivalry of individuals is also a prominent characteristic in the uncivilized state of society. But division of labor with coöperation and mutual interchange of the benefits and products of effort is the law of civilized life. Without these no community can become civilized or maintain the civilized state. In such a community no one can be for himself alone. Every one must both give something to, and receive something from, others. Likewise a group of individuals which stands for a particular interest, or represents a given line of activities, is dependent upon, and accountable to, every other group of the same community.

There is a certain analogy between the human body as an organism and the civilized community, and the more highly developed the latter, the more perfect is the analogy.

The body is an aggregation of organs, as the hands, the feet, the eyes, the ears, the lungs, the nerve centers and so on. Each organ has a function to perform both with respect to itself, and also in its relations to the organism as a whole. The principles of division of labor and coöperation, with mutual interdependence, are perfectly exemplified. The civilized community is likewise an organism separable into, or composed of, individuals or groups of individuals, each unit or group corresponding in some sense to an organ of the human body. There is the hewer of wood and the drawer of water, the farmer, the merchant, the manufacturer, the teacher, the preacher, the lawyer, the physician and so on, the organs of the body politic; each having a place for itself and a duty to perform for all the others. No one interest can suffer without detriment to the whole. The more harmonious and symmetrical the development of the various component parts, the more perfect the development of the whole. The more perfectly and clearly the true relations and the relative duties and functions of the several factors to each other are recognized and kept in view, the greater will be progress in all that goes to make up the civilized life.

The medical profession as one of the constituent parts of the community has intimate relations to every other interest and to every other part of that community. Its work and the principles which it represents, are in their importance to organized society second to no other.

If, as a modern philosopher declares with respect to the moral quality of human actions, "the highest conduct is that which conduces to the greatest length, breadth and completeness of life," then the medical calling must take high rank if not the highest of all others; for the genius and the end of this calling are to secure that length, breadth and completeness of life for all mankind.

Not many centuries ago medical knowledge and medical practice were concerned with little more than the giving of crude drugs and caring for the more common accidents of life. Diagnosis was almost purely a mental process, with only a slender basis in the observation of the most superficial manifestations of disease. Causation was mythical speculation based on superstition. Prevention of disease was counted a sacrilege rather than as belonging to the science and art of medicine.

But medical science has outgrown the narrow limits of the past, and the history of its growth from the primitive state to its present position is a part of the history of civilization. It stands for the physical perfection of the individual not only, but also for the improvement and perfection of the human race. Though it deals first and chiefly with the diseases and imperfections of the individual, it extends its dominion over aggregate life in all its combinations and ramifications, and inasmuch as it discovers and

demonstrates the laws and influences of heredity, over transmitted life as well.

While its most evident functions are to treat disease and manage the sick, yet it is not less concerned with the prevention of disease and the discovery of its causes.

It is the source of modern psychology which dictates modern methods of education. It is the center of all that knowledge of the defective and dependent classes, as the insane, the idiotic, the deaf and dumb, the pauper, the inebriate and the criminal—which has led up to their humane management and rational treatment.

It puts every branch of science under tribute; as biology, of which it is now itself recognized as a part, which demonstrates that the diseases which afflict mankind are largely the result of conflict between the lower and the higher forms of life; and the whole range of the physical sciences whose wonderful development has been such a conspicuous feature of recent time, and whose contributions have added immeasurably to the powers and scope of medical knowledge in the way of diagnosis, treatment, prevention and the discovery of the causes of disease. Medical science thus includes all knowledge of whatsoever kind, or from whatsoever source that tends to prolong life and ameliorate its conditions. This is the high conception of the nature and the purpose of the science and the art of medicine for which we would plead.

Through medical science the medical profession has a twofold relation to the community at large. First, that in which the physician lives for himself, and second, that in which as a benefactor he contributes to the welfare of others, in which he is the exponent of all that medical science means to men.

By it and through it he earns his living as a citizen. He thus discharges his first duty to himself and others both in point of time and importance. It is the field in which he toils as a man, that sowing and tilling he may reap from it the rewards of the labor of his life.

The medical calling considered purely as a calling in which the physician manifests the selfish side of his life, selfish in the sense and to the extent that he lives for himself as distinguished from others, stands on the same footing and sustains the same relation to the community and the State as any other calling.

Physicians are not entitled to any special privileges and should receive none on their own account. If they sometimes ask for them on this ground, it is through ignorance and mistaken notions of their rights and privileges. There is a widely prevalent notion in the minds of the public that the laws and customs of society "hedge about" the medical calling in such a way as to favor the physician as compared with those of other occupations. A presumably learned judge of our own State, within the last year, has given public utterance in his official capacity to this erroneous interpretation of the laws and customs of society as they relate to the medical calling, in a case which has become somewhat celebrated on account of the ruling of the court and the arguments used to sustain his position. A physician was called as an expert witness by the city of Springfield, as defendant in a personal injury damage suit. The physican refused to testify unless a reasonable fee should be guaranteed him as an expert witness. The presiding judge in arguing against the position assumed by the witness, said among other things that, "so far as the witness is able to respond to proper questions propounded to him on the trial of a cause, while he is upon the witness stand, without previously making special preparation or examination to enable him to answer that particular question, I think it is his duty to answer. Especially the court holds is that true of physicians. Physicians in this State are favored children of the State; a department of the State government is maintained very largely for their benefit; they hold a license to practice their profession and practice by grace as well as by right, and are so hedged about and protected by the laws of the State, and by public opinion and confidence, that in five minutes of a time a doctor may earn more than an ordinary laborer could earn in a day, and may continue to earn such fees all day long, even on a day he may be required to attend court, except the hour or so devoted to attending on the court. Very much of that is because of the laws of the State which nurse their profession, and by grace which the State and society extends to them in regard to their profession."

If the department of the State government here alluded to, viz., the State board of health, is maintained largely and principally for the benefit of physicians, then it ought to be wiped out of existence, and would be as soon as it were put to the test. If the State board of health has any reason for existence at all, it is because it is supposed to protect the lives and health of the people at large. And to the extent that these objects are secured, just to that extent is the physician in the pursuit of his calling, as it relates to himself, interfered with, rather than benefited. Perhaps the learned judge could tell us how the prevention of disease and the preservation of health by the State inures to the benefit of physicians, as a class, for it is not evident on the surface.

If the laws of the State "nurse the profession," and foster medical science, it is that the community as a whole may be benefited, and not the physicians as a class. If a law of the State exempts the physician from jury duty and other duties of the citizen, it is not because he himself has any claims to such exemption. If a city government gives the physician right of way in a crowded street, or allows him to break through a procession, it is not that he may thereby add to his comfort or his income, but because he is supposed to be on an errand of mercy and humanity for others.

"They hold a license to practice their profession, and practice by grace as well as by right," says our expounder of the law. If the practice of medicine is a legitimate calling, a useful calling, then the physician would seem to have the same right to pursue that calling as any other citizen has to pursue any legitimate calling. If so, then it is not in any degree by grace. The license of the physician like the license of the lawyer or that of the locomotive engineer is generally counted as an evidence of technical qualifications and a restriction or limitation. It has reference to the rights and safety of the community, rather than to the individual holding it. It tells the public that he is a physician in fact, not a pretender. It confers no benefit on the individual physician, but it does protect the interest of those with whom he deals, and is for their benefit, not his. Whatever benefits come to the physician by reason of the laws of the State, or customs of society bearing on the medical calling or the medical profession, are purely incidental to their primary object of conferring benefits on the community at large.

In this relation also the physician is entitled to the rewards of his labors. No less than others is he worthy of his hire. While he is treading out the corn like the ox, he should not be muzzled. If he tread the wine press he should share in the vintage. That every individual should receive all the rewards which his ability, his industry, and his opportunities can secure for him in a legitimate calling honestly pursued, is a self-evident proposition which admits of no exceptions. That community in which this fundamental principle is the most clearly recognized, and the most perfectly applied will be the best community, the most highly civilized, and the most perfectly adjusted in all its parts. If any one class or constituent part of a community is deprived of the legitimate reward of its labors, that class will lose something in its quality and in its power, and the society of which it is a part will suffer directly or remotely as a consequence. As when one member of the body deteriorates, the whole organism suffers loss.

Most physicians can be trusted as a rule to claim their own in the matter of pecuniary rewards for services rendered and they are not generally backward in asserting those claims. But as a class, physicians are inadequately paid if remuneration should bear direct relation to benefits conferred; and of all classes they are the most grudgingly paid.

The genius and the traditions of the medical profession require the physician to give his services whenever and wherever medical knowledge and medical skill are demanded for the relief of the sick and the afflicted, conscientiously to the rich and the poor alike, and with equal fidelity, and primarily without thought of reward. Thereby the medical calling becomes a profession as distinguished from a trade. By this token may we know the true, the ideal physician. But this conception of the professional aspects of the physician's life pertain to his obligation to his calling and his class, and does not carry with it the idea of unrequited toil. Neither does it absolve the individual or the community receiving those professional services from pecuniary obligations. While the physician is thus under obligations, by the very nature of his calling, to the poor around him, common equity would forbid that this obligation should be perverted by the community or any class of the community for its own benefit.

One of the most beneficent institutions of our day in theory and practice is the modern hospital, but there is a growing tendency to pervert and abuse it by certain classes of the community for the promotion of their own interest. The work of a large public hospital supported by general taxation, as for instance, the Cook County Hospital, is to a large and increasing degree taken up with the care of the sick and injured employes of the great corporations and the wealthy commercial establishments.

If such an employe can get free care and free medical attendance when sick or injured, he does not need and does not get as high wages as he otherwise would. There is, hence, more profit and larger dividends for the employer. If the multimillionaire corporation, half of whose capital is the value of the public franchise it possesses, and whose annual profits are so large that an occasional watering of its stock must be resorted to in order to keep the percentage rate of dividends within a reasonable limit in the eyes of the public, can require the medical profession and the public to treat and care for its sick and injured employes free, in order that the profits of the concern may be larger on account of low wages of the employes; then why may not the public and other interests be compelled to furnish said employes with such other necessities as food, clothing and house rent. The sophistry and process of reasoning that would make one appear right and respectable can be used to justify the other also.

There are rewards other than pecuniary which are due the physician from the community, and of which he is sometimes deprived. It is due to the dignity of his calling, and in the interests of the highest usefulness of the profession to the public, that all positions of honor, profit, or trust, whose chief functions pertain to medical matters and require medical knowledge for their administration, should be held by physicians. The law expressly forbids that the president of the Board of Health of New York City shall be a physician, though a physician living in that city is eligible for the office of President of the United States, for that of Governor of his State or mayor of his city. Just why this prohibition exists is not explained, but it may be surmised that it is because it is the one position in the department which carries with it a high salary. In the chief city of our own State, the only medical office in the city government with a respectable salary is held by a layman, who never was suspected of having any knowledge of, or interest in, sanitary matters. The knowledge necessary for conducting the Department of Health is supplied by some ten or twelve physicians in subordinate positions, whose combined salaries amount to but little more than the salary of the layman who is at the head of the department. A company of West Point graduates going into battle commanded by a green recruit, would not be more anomalous. In our own State, as in most of the other States, the law provides for the office of coroner for each county. It is the chief duty of this officer to ascertain the cause of death in certain cases. The office is held in all the larger counties, that is, where there is any considerable remuneration attached to the office, by a man who possesses no medical knowledge whatever. He is ably assisted in his quest by six other laymen as jurors, who, in the large cities, are generally tramps. In our own State it is still allowable for six men, also mostly tramps in the large cities, to make a diagnosis of insanity in the name of the State.

There is another evil under the sun which pertains to the practitioner and the question of the rewards of his labors. A confusion of values in the minds of the public, and to some extent in the minds of the profession, has arisen in these latter days with respect to remuneration. This is partly due to the exuberant specialism which characterizes modern medicine. It is also partly due to the greater advance and wider scope of operative surgery, and in part to the relatively unimportant rôle which the internal treatment of disease by drugs has assumed in comparison with former times. There never was a time when the drug treatment of disease could accomplish more than to-day, when internal medication was more definite in its purpose, though its limitations are better recognized than before. While in former times it outranked in importance all other means and methods, to-day preventive medicine and operative surgery have outstripped it in the general advance in demonstrable results. But the physician who clearly saves a life by internal medication ought to have the same recognition from his fellow practitioners, and to

receive the same rewards from the public as he who does a life-saving surgical operation. If a practitioner prevents sickness which might or might not prove fatal, by timely advice to the family and neighbors who rely on him in times of thickness, as by preventing the spread of typhoid fever, diphtheria and other contagious diseases, he renders a service upon which an adequate money value can not be placed, and yet he rarely receives any pecuniary or other reward for such a service. Even the average educated, prosperous citizen would resent the effort to collect more than a nominal consideration.

The family physician who stands by his trust and faithfully guards and guides a whole generation from birth through childhood and adolescence to manhood and womanhood, directs their education, training and growth, and blazes the way against the pitfalls of hereditary tendency to disease of body and mind, and in all these periods and relations gives the best resources of the whole range of the science and art of medicine to his charge, outranks in point of service to the individual and humanity all other classes of practitioners. It is to the detriment of the medical profession and the community that he does not receive greater rewards, both honorary and substantial, for his work. As compared with the specialist and the surgeon he gets scant measure of either, and yet he outranks them all.

The medical profession has a standing grievance against the community in that the pretender, the unscrupulous and the ignorant so often receive the encouragement and the rewards which by right belong to the qualified, conscientious, educated physician. It is partly true, as the poet says, "'tis understood that the good are half bad and the bad are half good," and in the general mixture of motive and conduct who is competent to draw the line, and who shall furnish the standard of measurement? It ought not to be difficult, however, for those who desire to do so, to discriminate between the true physician who pursues his course animated always by the professional spirit which requires that his own interests be secondary and subordinate to those whom he serves, whose whole trend of life is right, whose attitude is in the right direction, and him on the other hand whose whole conduct and attitude are wrong. Two men may stand very close together and yet face in opposite directions. The charlatan is not only the *ignorant* pretender. He may be highly educated and skilful. He may have high social standing. He may not only be in evidence in the advertising columns of the newspaper, but be the special pet of the editorial chair. His chief and distinguishing characteristic everywhere and always is that he uses the public and his patients for his own aggrandizement. He considers always that his patient is made for him and not he for the patient. His attitude to the public is that of the tradesman, and he is animated by the spirit of the tradesman. He makes merchandise of his calling. He takes advantage of the foibles and weaknesses of humanity to add to his own fame, power and pelf. In his most perfect and typical form he is essentially a parasite on the profession. He assumes the color and the garb of his host, living on his vitality, receiving everything and giving nothing in return. He lives the life of the parasite and should receive the treatment of the parasite. Many of the best of men may be weak enough to yield to temptation of special influence or other causes to show some of these characteristics in a greater or less degree some time or many times in their professional life, but wherever found, whether in the members or officers of our own medical societies, whether in the professors of colleges or in others, to the extent and in the degree that they are manifested, they become the acts and the methods of the charlatan and the unscrupulous. If the one attitude is right the other is wrong. Which course, followed to its logical conclusion, will prove beneficent and which destructive?

It ought to be better understood and more constantly kept in view that medical science is a field without metes and bounds, is one and indivisible, and all inclusive. There are no schools of medical science any more than there are schools of the science of chemistry or astronomy or law. Even the so-called "schools" or "systems" of medical practice are a mental abstraction, consisting more of traditional and and rhetorical phrases expressive of a subjective mental state than an objective reality. Such a conception was more or less excusable and suitable, perhaps, in the pre-scientific era of the middle ages when metaphysical abstractions and dogma were the stock in trade of the schoolman, the transcendentalist and the doctrinaire, but it is a crime against the light of these latter days of the nineteenth century.

It is not the belief of the medical man or the doctrine which he holds; it is not what he does nor how he practices; it is not what society he is a member of, nor what written code of morals he professes to be guided by, that is the test of his right relation to medical science and the public. Here again it is his attitude by which he is to be judged.

No doubt there are many well informed people in this audience, well informed in other respects, as there are in every community, who persist in believing that this and similar societies require their members to subscribe to and be governed by a code of ethics which is more or less artificial in character and inapplicable in other walks of life. There is no such artificial code. What we have is but the amplification of the golden rule and the sermon on the mount, set to phrase suited to the medical relation. We teach through our code what is taught as good morals and good manners by every teacher of morals from the forum and the pulpit to mankind, from the cradle to the grave—this and nothing more. Whether it should be used for disciplinary purposes and to what extent, or whether it should remain as a formulary of precepts as its language would seem to imply was the original intention, are the only questions that can be or ever have been raised regarding the code of medical ethics.

No doubt also the belief is just as prevalent that we and all similar organizations require our members to subscribe to some set of doctrines, or a confession of faith, and to conform to certain modes of giving drugs. We know of no such doctrines or rules, except as they are sometimes put into our mouths through others. We hold that no truth is final, and that no man should limit his studies or his practice by any confession. We hold that every proposition of doctrine or of practice must stand or fall to the mind of every individual without let or hindrance, and that there are no limitations on what any man may do in the way of practice or hold in the way of belief except such as are due to himself—his own powers and disposition. More than this we could not do. Less than this would change our atti-

tude to medical science, to other medical men and to the public, and place us in the ranks of the sectarian physician. This attitude of mind in the physician in his relation to medical science and the public is in a limited way akin to that of the banker in relation to the coin of his customer. Every coin offered him he must accept or reject by his own mental process on the evidence obtainable. He scans it, handles it, turns it over, tests it ring, weighs it, and receives it for what it seems to him to be worth. If it is counterfeit, it is rejected at once and absolutely. If it is a debased or clipped coin, he ascertains its value and acts accordingly. If the man of science recognizes the falsity or counterfeit character of some supposed new science, new method or new proposition, and rejects it as peremptorily as the banker does the counterfeit coin, or after examining all its claims to being genuine, still rejects it or receives it only for what it is worth, he is likely to be called a bigot or to be charged with intellectual intolerance to a degree which only medical men are supposed to be guilty of.

Indeed intellectual intolerance is a charge which is too often laid at the door of the medical man when he turns away from the sciolist and declines to share with the psuedo-scientist.

An episode in the life of Israel's king, Solomon, affords a lesson and an answer. He proposed with his sword to divide the living child which was in dispute, in order to determine which was the real mother and which was the pretended mother. The latter counted it a liberal proposition, but the real mother surrendered rather than to submit to such a compromise. There are some things which can not be shared and are insusceptible of division.

Medical science appeals for help and wider recognition from the public and the State. It could easily be shown that the greatest discoveries in this field have through all the past and in recent times conferred much greater proportional benefits on every class of the community than on physicians as a class. It could equally be shown that almost all the valuable discoveries and resources for prolonging life, relieving suffering and preventing disease have been due to the individual efforts of those devoted to medical science with little or no aid from the State and the non-medical public. A few notable and honorable exceptions there may be.

Moreover it is not generally appreciated that almost every one of the epoch-making discoveries have contracted the field for the practitioner and curtailed his resources for earning a living. It ought not therefore to be expected that the medical profession be wholly responsible for the future progress of that science which adds so much to the public welfare and at the same time works to the detriment of the medical calling as a calling. It is unreasonable not to expect that some of the increasing wealth of private citizens and the fostering care of the State should share in the work of discovery and application and bear the burdens thereof.

One thing the situation demands: A better education of the citizen; not of the present generation already in the field of active pursuits, for that is practically hopeless; but better education of the present and future youth of the country—that all educational institutions from the lowest to the highest shall take cognizance of the new fields of knowledge and the new methods of thought and investigation which have come into view in the last quarter of the century.

A recent writer on higher education says: "Men may be educated in literature and philosophy and yet only half educated or uneducated in science and thus liable to terrible mistakes because they are color blind as to the half of human knowledge. Some of our greatest orators and most popular writers are simpletons as to scientific methods and arguments." To which sentiment we all say, amen!

And another thing the situation demands, viz.: That the United States Government which professedly represents the most civilized, the most enlightened, the most progressive, the most peaceable and the wealthiest in resources of all the nations of the earth, shall nominally and actively recognize the claims of medical science as a science and in its beneficent relations to the people, and shall serve as a channel through which the energies and the wealth of the people shall be directed to these ends.

A peaceable government which spends eighty millions of money a year on its army and navy in times of peace, one hundred and fifty millions in pensions, sixty millions on its inland rivers and harbors, and many millions more to promote commerce and other material interests of its people, ought to spend more than one or two hundred thousand dollars a year in the interests and in the name of the health of all the people. This small pittance which is now expended in this direction is spent in the name and for the sake of trade and commerce by the Marine-Hospital Service for the purpose of quarantine, one of the subordinate functions of this department, which is itself a subordinate department of the executive branch of the government. We read of some of the minor employes of the government having charge of the inspection of meats and other food products; but we also learn that this is carried on wholly in the interests of our trade relations with other countries and not for the sake of the health of the consumer or producer. How many of even the best informed citizens of this country are aware of the fact that if smallpox existed as it did one hundred years ago, that if cholera and yellow fever could not be controlled better to-day than they were twenty-five years ago, to say nothing of other forms of contagion, pestilence and plague—with the increased means and rapidity of travel and with the hundredfold increase of running to and fro upon the earth, I say who and how many know that with these conditions, the towering industries would be brought low, the mighty channels of commerce would be closed, great cities wiped out, the whole population decimated every decade, and if we believe the testimony of the older days, those of the people who remain would nearly all be defaced with pock marks.

The militant type of government was proper enough in earlier history and is well enough now in some of the nations of the world, perhaps, but our government at least must be readjusted to the industrial peace type which our conditions require. The heads of the army and navy departments, now so prominent in the councils of the government, must give way to those who represent the arts of peace, industry and humanity. In this adjustment, we propose to take part and to be a part with the permission and cooperation of the intelligent people. Hygeia will rise step by step until she strikes hands with Ceres and have an equal voice in the councils of the nation.

Then we shall see tuberculosis, the remaining

greatest scourge of the race, which is now accredited with one quarter of the mortality of our time, shorn of its power and controlled.

To quote from a recent address of President Eliot:

"The public does not use its imagination sufficiently with regard to the future of preventive medicine. Leprosy and smallpox have been measurably conquered; it has proved possible to exclude cholera and yellow fever; and yet the public is not impatient for the conquest of every other infectious and contagious disease, and often not willing to provide the necessary means of deliverance from these evils. Some of the most intelligent communities refuse to establish public disinfecting stations. Bacteriological laboratories are few and far between, when they should be everywhere accessible. Pure water supplies have diminished typhoid fever in urban populations, but the rural populations, through ignorance, still suffer disproportionately from this preventable scourge. The faith and hope of the medical profession should arouse the public from this lethargy, and redeem it from this destructive ignorance and incredulity."

In our own State as well as in the general government, we are not living up to our requirements nor our opportunities. We are lagging behind less favored communities in the matter of legislation, looking to the best things in medical science relating to the control of disease and the promotion of health. We have many laws and fragments of laws which seem to have or to have had at some time, beneficent aims in this direction, but they were mostly enacted from and when enforced at all, are enforced from the standpoint of commerce and the good of some local material interest.

We have nominally a State Board of Health, but it has made little impression on the affairs of the State in the name of health, largely from lack of sufficient appropriations, and from lack of the moral support of the community and the medical profession. More of the intelligent and influential members of the profession should be willing to make some sacrifice of their own interest, and take part either directly or indirectly in legislative affairs.

An over-view in the presence of our legislature when in session, is both instructive and discouraging, but by this I mean no disrespect to the mass of well-meaning men who are there. A veteran in legislative halls summarized his experience epigrammatically by saying that the less one knows of how law is made, the more he will respect the product. Of the several hundred bills introduced into our last legislature, aside from general appropriation bills for current expenditures, nine-tenths of them were for the promotion of some local or special interest. A bill looking to the general welfare is generally crowded out or defeated. It has come to be more and more that a legislature is made up of representatives of interests rather than of representatives of a certain number of people. A sprinkling of intelligent medical men to represent the medical interests and to see that medical questions receive respectful and a due share of consideration, might improve a legislature and its work. It could not affect it seriously otherwise.

When medical men are willing to take part in public affairs instead of staying at home and grumbling, and writing jeremiads, medical questions may be better treated in legislative assemblies and by the public generally.

To quote again from President Eliot:

"The medical profession has before it an entrancing prospect of usefulness and honor. It offers to young men the largest opportunities for disinterested, devoted and heroic service. The times are passed when men had to go war to give evidence of endurance, or courage, or capacity to think quickly and well under pressure of responsibility and danger. The fields open to the physician and surgeon now give ample scope for these lofty qualities.

"The times are past when the church alone asked men to devote themselves patiently, disinterestedly, and bravely to the service of their fellowmen. The medical profession now exhibits in highest degree these virtues. Our nation sometimes seems tempted to seek in war—that stupid and horrible savagery!—for other greatness than can come from vast natural resources, prosperous industries and expanding commerce. The pursuits of peace seem to pall for lack of risk and adventure. Would it might turn its energies and its longing for patriotic and heroic emotion into the immense fields of beneficent activity which sanitation, preventive medicine, and comparative medicine offer it! There are spiritual and physical triumphs to be won in these fields infinitely higher than any which war can offer; for they will be triumphs of construction and preservation, not of destruction and ruin. They will be triumphs of good over evil, and of happiness over misery."

ORIGINAL ARTICLES.

WHAT CONSTITUTES TRUE CLINICAL EXPERIENCE IN MEDICAL PRACTICE AND ITS RELATIONS TO THE PUBLIC HEALTH?

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

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Clinical experience is to be regarded as the knowledge gained by a direct study of diseases or morbid processes, including their causes, symptoms, progress, natural tendencies and results, and the actual influence of remedies in arresting, modifying them or shortening their duration. If this is correct, it must be obvious that the value or reliability of our clinical experience will depend directly upon the extent and accuracy of knowledge of the nature and modes of action of the causes of disease, the natural tendencies and results of each disease or group of morbid processes, and the actual mode of action of each remedy used in the treatment of such processes. In other words, the clinical experience of members of the profession will be reliable, just in proportion to their knowledge of etiology, pathology and therapeutics.

It was not until the last fifty or seventy-five years that organic and physiologic chemistry and microscopy had attained such a degree of development that many of the exciting or efficient causes of disease could be identified and their mode of action in the living body determined. Patient, persistent observation through the preceding centuries had led the profession to believe that all acute general diseases were caused by specific causes to which the names of malaria, miasms and contagiums were given. But their identification had, in far the greater number of instances, eluded the powers of simple observation; and consequently, neither their mode of development nor their mode of action on the functions or structures of the body could be traced with accuracy. The same remarks are applicable to our clinical knowledge of the action of remedies. Without the aid of the more recent improvements in chemic and microscopic methods of research it was not possible, in the first place, to separate the active agents from the crude materials of the drugs, and then so closely follow the active agents when administered as to see what changes, if any, they undergo, what changes they effect in any of

the functions or structures of the body, and through what channels they are finally eliminated.

So too, in the study of diseases by direct observations at the bedside. Only the knowledge of the manifest symptoms presented during the successive stages in the progress of disease, the greater or less amount of secretions, and the duration of each stage could be determined. And if postmortems were made, they revealed only the *results* of the morbid actions that had been taking place, and not the philosophy of the actions themselves.

It is true that our predecessors, while thus limited almost exclusively to observation, or the use of their own senses, in the study of disease, gave us more minute, painstaking and complete symptomatologic descriptions of the more acute diseases, than can be found in the medical literature of the present day. But as they could neither see nor determine the actual morbid processes or the *modus operandi* of their causes, they were compelled to define diseases by groups of associated symptoms, as fevers, inflammations, etc., and their causes by names that conveyed no real knowledge of their nature or origin, as miasms, septic poison, foul air, hereditary, meteorologic and epidemic influences. They logically assumed that every disease or group of associated symptoms must have a cause. If careful observation proved that a certain group of symptoms originated mostly near marshes or on rich alluvial districts of country, it was assumed that some causative agent was developed to which they gave the hypothetic name of malaria or marsh miasm. If another associated group was found prevailing principally in densely populated districts with crowded and ill-ventilated tenements, dirty streets and impure water, it was assumed that from these conditions another hypothetic poison was evolved, to which was given the name of idio-miasm.

With neither an exact knowledge of the nature and mode of action of the supposed causes of disease, nor of the morbid processes constituting disease, the selection and administration of remedies could not be otherwise than empiric or else aimed at the relief of particular symptoms. And this again necessitated the classification of drugs in the materia medica on a symptomatic basis, as emetics, cathartics, diuretics, diaphoretics, narcotics, stimulants, sedatives, tonics and alteratives, according as they increased evacuations from the stomach, intestines, kidneys or skin, allayed pain and induced sleep, increased the frequency of the heart's action with a sense of exhilaration or excitement, or the reverse; a feeling of increased strength or endurance; or such changes in metabolism as resulted in the removal of adventitious tissues and morbid growths.

It was during this long period of dependence upon simple observation, with very limited means for obtaining more complete and exact knowledge concerning the actual changes taking place in the living structures under either morbific or remedial influences, that all our literature relating to the departments of etiology, therapeutics and practical medicine was developed. And much the larger part of the hypothetic names and words, and phrases of ill-defined meaning, which they necessarily embodied, are retained not only in our text-books, but still more in all the secular literature of the present day, thereby causing an unlimited amount of confusion in both the public and professional mind.

Thus, while dependent on simple observation and our sensations for judging of the action of remedies, we classed all agents that, when taken, induced increased frequency of the pulse, with sensations of warmth in the stomach and general feelings of excitement or exhilaration, as stimulants or restoratives. And as moderate doses of nearly all the narcotic and anesthetic drugs produced just these effects, they were made to constitute the greater part of the class of stimulants, with alcohol in the forms of fermented and distilled drinks at their head. Hence a resort to the latter for relief from weakness, weariness, coldness, faintness, depression, shock, or even apprehension of exhaustion, became almost universal both by the profession and the public. And it is still this underlying fundamental idea of their power to stimulate, restore and sustain, that leads to and perpetuates their use not only in the treatment of all diseases of supposed debility, but also in enormous quantities by nearly all classes of people, to relieve every depression of feeling or apprehended evil, mental or physical. And all this is easily traceable for its support to the simple alleged clinical experience of the profession as found in our standard works.

Thus, in one of the recognized standard works on the nature and action of remedies, we read that alcohol "taken internally, in small quantities appropriately diluted, excites a sense of warmth in the stomach and, if the person is very susceptible, an almost instantaneous glow throughout the body, with increased frequency and force of the heart and pulse, a livelier flow of ideas which are, according to the temperament of the individual, gay or gloomy, and actions which, in like manner, may be playful or malevolent." This, you will perceive, is a simple transcript of the sensations and actions of the individual under the influence of the drug. And the same high authority adds: "The use of alcohol in every age, and by every nation in the world, demonstrates that it satisfies a natural instinct, that it literally refreshes the system exhausted by physical or mental labor, and that it not only quickens the appetite for food and aids in its digestion, but that it spares the digestive organs by limiting the amount of solid food which would otherwise be required."[1] This, the author seems to say, is the actual clinical experience of the whole world in regard to the use of alcohol in appropriate doses, and yet it all rests on the sensations of the user, without any accurate knowledge of the actual changes produced by the alcohol on the constituents of the blood, the sensibility of the cerebral hemispheres, the cardiac and respiratory nerve centers, or on the metabolism of the tissues and organs of secretion.

The "natural instinct" spoken of by the author, and often repeated in popular literature, can be nothing more than the desire of a sentient or intelligent being to be relieved of any or all uncomfortable feelings, whether mental or physical. And as alcohol in moderate doses, like all other anesthetics, relieves, at least temporarily, *all* uncomfortable feelings, whether of grief, despondency, weariness, weakness, cold, heat or pain, it is *that* which constitutes the "literally refreshing" influence it is supposed to exert on the human race; and in *that way only* does it satisfy any "natural instinct" in the human family.

It is clearly apparent, therefore, that all the past and present uses of alcohol in the forms of fermented and distilled liquors, both as medicines and beverages, originated from, and still depends for support upon,

[1] See National Dispensatory, pp. 123–4.

the supposed *clinical demonstration* that in moderate doses it warms, stimulates, refreshes, strengthens and exhilarates all the functions of body and mind. Could there be a more striking illustration of the direct connection between the alleged clinical experience of the medical profession and the interests of public health and morals?

As has been already stated, however, all this clinical experience is based on the sensations, movements and opinions of the patient or person under the influence of the alcohol. He swallows a moderate dose, and its contact with the gastric mucous membrane produces a sensation of increased heat and he says it warms him. Being rapidly absorbed and carried to every tissue in his body, its contact with the nerve structures directly diminishes the sensibility of the sentient nerve cells, and therefore he feels less conscious of weariness, weakness, restlessness or pain, and consequently he thinks it refreshes, strengthens and comforts him. But the same lessening of nerve sensibility extends to the nerve cells connected with both mental and cardiac inhibition, and hence he believes he can think and talk faster, and do more, and the heart beats a little faster. Hence both he and his friends say it stimulates him.

Yet, when we apply the tests of philosophic instruments for accurate measurements, and thereby obtain results independent of the sensations of the individual, just when he thinks a moderate dose of alcohol is warming, strengthening and refreshing him, and enabling him to work and think or talk faster, we find his temperature diminishing, his nerve sensibility less acute, its transmission of impression slower, his mental processes tardy and less accurate, his muscular strength and endurance less, less oxygen and more carbon dioxid in the blood, and diminished metabolic changes generally. And when his period of this kind of refreshment has passed, instead of being invigorated and ready for active work, either mental or physical, he is pervaded by a feeling of dullness and depression that makes him think another dose of the same refreshing liquid necessary.

In other words, we have the complete demonstration that the so-called refreshing and strengthening effect of alcohol depends entirely on its anesthetic properties, by which it diminishes the sensibility of the nerve cells of the brain, the material seat of consciousness, and thereby diminishes the consciousness of all impressions, whether of heat, cold, weariness, weakness or pain, and at the same time lessens every physiologic process taking place in the blood, tissues and organs of the body; thus showing the entire fallacy of all the clinical experience founded upon the patient's feelings or conscious impressions, and enabling us to see clearly how alcohol or any other cerebral anesthetic may cause patients to think they are stronger and better, when in truth all the vital or physiologic processes are diminished. And if the use of the agent is repeated from day to day, even in the most moderate doses, we see how the user is induced to think he is being refreshed or sustained, while all the metabolic processes are being retarded, his power to resist or eliminate toxic agents diminished and molecular degeneration of tissues encouraged.

Then why continue to call an agent a stimulant or tonic, that simply diminishes the patient's consciousness of weakness without adding anything whatever of strength or tissue repair, but really impairs both in direct proportion to the quantity used?

However, it is not solely in regard to the use of anesthetic and narcotic agents capable of diminishing the sensibility of our seat of conscious impression, that our clinical experience has proved fallacious. Only a few years since, the profession were taught to regard the degree of pyrexia or heat as the chief element of danger in all the acute general diseases. Consequently, to control the pyrexia became the leading object of treatment; and whatever would do this promptly, and at the same time allay pain and promote rest, found favor at the bedside of the patient.

It was soon ascertained that antipyrin, antifebrin, phenacetin and other analogous products, if given in sufficient doses, would reduce the pyrexia and allay the pains with great certainty and promptness, not only in continued fevers, but also in rheumatism, influenza or la grippe, etc., and their use soon became popular both with the profession and public. No one undertook to first ascertain by strictly scientific appliances the actual pathologic processes causing the pyrexia in each form of disease, or even to determine whether, in any given case, the increased heat was the result of increased heat production or diminished heat dissipation. Neither were any of the remedies subjected to such experimental investigation as to determine their influence on the elements of the blood, the internal distribution of oxygen, the metabolism of the tissues, or on the activity of the eliminations. Consequently, their exhibition was wholly empirical, and the one that subdued the pyrexia most promptly was given the preference.

Yet we all know that the pyrexia invariably returned as soon as the effects of each dose were exhausted, and in a few years the results showed that while the antipyretics served to keep down the pyrexia, and give each case the appearance of doing well, the average duration of the cases and their mortality were both increased. Step by step experimental therapeutic investigations have proved that the whole class of coal tar antipyretics reduce animal heat by impairing the capacity of the hemoglobin and corpuscular elements of the blood to receive and distribute free oxygen, and thereby reduce temperature by diminishing heat production, nerve sensibility and tissue metabolism. Therefore, while each dose temporarily reduced the pyrexia, it retarded the most important physiologic processes on which the living system depends for resisting the effects of toxic agents, namely, *oxidation* and *elimination*. This not only encouraged the retention of toxic agents and natural excretory materials by which specific fevers were protracted, but it greatly increased the number of cases of pneumonia complicating the epidemic influenza or la grippe as it has occurred since 1888–89. And it contributed still more to the production of that remarkable cardiac, vaso-motor and respiratory debility that has followed very many of the cases of the disease just mentioned.

I might cite other cases occurring both in the present and past history of the profession, showing the entirely fallacious character of the clinical experience founded on simple empirical observation, and the injurious effects of such alleged experience on the public health. But the illustrations already given are sufficient for my present purpose, namely, to urge the necessity of a much more thorough experimental study of the nature and action in the living body, of the toxic agents constituting etiologic factors; the nature, tendencies and results of morbid processes constituting

diseases, and the actual *modus operandi* of the medicines we use in their treatment. The facilities for such study afforded by our chemic, physiologic, pathologic and therapeutic laboratories and instruments of precision, should be so utilized as to speedily impart to the clinical experience of the profession a degree of reliability that, in its reflex upon the public, would greatly improve the public health, both mental and physical.

STATE SUPPRESSION OF INEBRIETY AND CURE OF INEBRIATES.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

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Much attention has been given in this country and elsewhere, within the last fifty years, to the subjects of inebriety and the cure of inebriates. Many schemes for the suppression of inebriety and the cure, or reformation, of drunkards have been suggested, adopted and tested experimentally with—notwithstanding much good accomplished—unsatisfactory results. These schemes have consisted mostly of so-called temperance societies, on becoming members of which persons pledged themselves by signature, or oath, to totally abstain from intoxicating drinks; political party organizations, seeking by legislation to prohibit the manufacture or sale of intoxicants within the State; public and private asylums for inebriates; and last, if not least, innumerable gold-cures and other quack pretensions for the regeneration of drunkards.

Promising as some of these schemes were in their inception, that they have all failed to accomplish the desired end is not now a mystery to the more observing and thoughtful.

Such being the fact respecting schemes heretofore tested, it may be rationally affirmed that inebriety is not suppressible to any great degree by social influences, moral suasion, oath-bound obligations, or personal pledges; nor are inebriates, as a class, curable by medication, general or specific, secret or open, if not otherwise restrained; and that "prohibition does not prohibit." But as philanthropists, social scientists and physicians we can not accept this verdict as the end of contention and effort for a "consumation devoutly to be wished."

What further effort then shall be made for the suppression of inebriety and the cure of inebriates? After many years' observation and experience in the treatment of this class of persons, and careful study of the causes of failure already affirmed, it is evident to me that there are but two methods which give promise of much greater attainment than did those already tried and found wanting.

One of these methods contemplates absolute prohibition, or putting all intoxicants out of the reach of inebriates; and the other contemplates putting the drunkard under such (bearable) restraint that he can not reach intoxicants; methods, neither of which can be successfully administered by other than the authority of a State. The question then arises: Can or should the State interest itself in such matters?

It may be again rationally affirmed that the State, being simply the mechanism through which popular energy emanating from the people is transmuted into governmental energy, having in view "the greatest good to the greatest number," should be interested and exercise authority for the suppression of inebriety, because inebriety is offensive to society and beneficial to nobody; and in the cure of inebriates, because inebriates are citizens of a defective class, disqualified for the functions of good citizenship and dangerous to themselves and others, by reason of disease that is not amenable to ordinary, or other, medical treatment.

The first of the foregoing propositions likely to be challenged is that which affirms the incurability of inebriates by moral or medical means. It is rational indeed for persons who see only the factor of vice in the problem of inebriety, to believe in the efficacy of moral suasion, or correction, for its suppression, or the cure of the inebriate. One may be rational, however, and yet very much mistaken. Reason finds in accordance with whatever testimony is before it, and is as facile in confirmation of error as of truth. The ignorant—at all times a comparative term including the greater portion of mankind—and some doctors of medicine—regard all phenomena as supernatural and occult. They ascribe the phenomena of evil to a supreme spiritual embodiment of evil immanent in the universe, between which and a supreme spiritual embodiment of good, also immanent, if less active, poor man is forever being attracted or repelled, as by the poles of a gigantic spiritual magnet, though boasting still of freedom. Inebriety being regarded as a vice, what could be more rational than the supposition that all that is required for its suppression is a renunciation of evil and submission to good? Regarding inebriety as a manifestation of disease, believing disease to be instigated by, or in some way related to supernatural influences, and ascribing the curative virtues of drugs to supernatural qualities, with the blind faith or fetishism of ignorance, what more rational than to suppose the inebriate can be cured by medicine? A wider range of testimony, however, discredits and renders irrational both theory and practice. If the testimony of a single century against these assumptions is not sufficient, the facts of human history stand arrayed in solid columns ready to confirm it. Nor should the more enlightened be impatient because of the credulity and delusions of the ignorant, as out of the same root-conditions they have grown into higher light and broader perceptions. Knowledge of the constitutional history of a man—biologic science, indeed—is a revelation of to-day. The physiologic effects of medicines, as related to constructive and destructive processes effected by them when ingested by living beings, are of too recent recognition to have become generally understood, or accepted as valuable knowledge. No physician of education and experience, however, will pretend that other than exceptional persons suffering genuine pathologic inebriety, have ever been cured by any social or moral influences that could be brought to bear upon them, or by the administration of drugs of any kind. By cure I mean restoration to primary conditions and normal appetites, the establishment of physiologic protection against almost immediate relapse.

Objection to State interference with inebriates, other than punitive, will be made by a class of pious or fanatic religionists, who fear that by consenting to any measures for the suppression of inebriety, or cure of inebriates, that do not express their ideas of sin and reclamation by fear of punishment, they will in some way commit themselves to toleration, if not

approval, of vice and thus become accessory to crime. A class conscientiously opposed to any legal enactments contemplating an amelioration of the conditions of the sinful, or the protection of the innocent, by "regulating" social vices that can not be eradicated under immediate circumstances, because of mistaken notions respecting the relation of vice to material conditions, and the relation of government to social circumstances. Persons incapable of reflection, because void of facts or inconsiderate of their significance, who feel that their whole duty has been done toward their fellow men when they have notified them of their sinfulness, warned them of consequences, and pointed out a narrow way of escape, saying to themselves: "Let them do as bidden, or be damned! If society suffers let society suffer! or join with us and make short work of this iniquity." In close practical alliance with these pious people are the makers and venders of intoxicants, and all of the vicious classes of society which blindly antagonize the authority of State on general principles. Still another class of citizens, pseudo-philosophic politicians, who maintain the rights of individuals as superior to the rights of society, and resent the interference of government in matters so personal as eating and drinking, or the observance of holy days, or any exercise of "paternalism" as a function of State; maintaining the right of a man to get drunk and suffer the consequences, if he so elects, oblivious to the fact seemingly that while the individual alone gets drunk, society is the principal sufferer of consequences. The affirmation that inebriates belong to a defective class of society, correlatable with the insane and criminal, may also be challenged. That they do constitute a defective class so correlatable may be inferred from the fact that, while the appetite for brain-stimulants, or sedatives, is common to mankind, and universally indulged by the use of some natural or artificial product, alcohol, opium, tea, coffee, cocoa, kola, tobacco, and others, but a small proportional number become inebriates, or pathological habitués of such intoxicants, showing that the potentiality of inebriety is as definitely referable to organic peculiarities as is the potentiality of insanity, about which there is no longer room for disputation. Were no distinction of this kind to be made, indeed, were the liability to become insane or inebriate the same for all persons under the same conditions of provocation, but few persons instead of the many, would escape lunacy or inebriety. A few drinks of whisky may determine the fate of a man of neurotic instability of nerve organization; while many others, not so constituted, may drink occasionally or frequently, for years, without danger of becoming inebriates. That inebriates are correlatable with the insane constitutionally may be inferred from the facts that an intemperate use of alcohol is regarded as an efficient exciting cause of insanity, and inebriety is recognized as the manifestation of cerebral disease by which mental capabilities are impaired and disordered temporarily or permanently. So parallel indeed are the psychic phenomena of insanity and inebriety even experts have sometimes to differentiate one from the other by physical signs and commemorative circumstances. What are the psychical characteristics of simple, typical lunacy?

1. Well marked departure from ordinary habits of thinking and acting on the part of the lunatic.

2. Loss of self-control, partial or entire.

3. Deterioration of moral perceptions, inveracity, immorality of conduct and depraved appetites.

4. Deterioration of general intellectual capabilities, disorderly imagination and defective reasoning, stupidity, insensibility, death.

Are these not also characteristics of inebriety? How close the resemblance of periodic mania and periodic inebriety, commonly called dipsomania? Are not the accessions of these two conditions as irresistible as the explosion of epilepsy, and indicative of correlatable neuroses? Was epilepsy ever cured by moral suasion? Did any other than a mercenary quack ever pretend to cure an epileptic by specific medication, who did not, sooner or later, discover the error of his pretension?

The affirmations that inebriety is a manifestation of morbid physical conditions effected by the interaction of intoxicants with the activities of defective structures, practicably irremediable by moral or medicinal treatment, and that the State is justifiable in administering all needful authority for its suppression, and the cure of its victims, because of its offensiveness and their helplessness, being admitted, the only question left for discussion is: By what method can the State accomplish the desired end most effectually and satisfactorily?

Of the two methods already alluded to, namely, putting intoxicants out of reach of inebriates, and its alternative, putting inebriates out of reach of intoxicants, the latter seems to me much more promising than the former.

Prohibitory liquor laws have failed of complete success because they can not be executed with the hearty good will of the people and are therefore imperfectly enforced. They are objectionable to many persons who have no need of protection from them, because of their own infirmities, for the reason that they require a large majority of citizens to forego certain privileges held in high esteem as pertaining to the rights and dignity of freemen, for the benefit of the few who have by viciousness or weakness forfeited such privileges. Furthermore, unless such laws could be made National, State lines are too thin to protect the citizens of one State from the liberality of the laws of adjoining States.

Inhibition of inebriates from intoxicants is less objectionable and more practicable, because laws providing for such restriction could be executed with the full approval of nearly all citizens, as they would deprive no one of liberty that had not forfeited some of the privileges of citizenship, or who would not be personally benefited thereby.

This method of suppressing inebriety, and curing inebriates, contemplates something more than the establishment of asylums, or recruiting stations, where inebriates can recuperate sufficiently to go out and enjoy another season of debauch; it contemplates a colonization, so to speak, by voluntary and involuntary settlement, or admission, of all inebriates within a given district of the State, where not only hospital accommodations and appliances for the treatment of the infirm will be provided, but such a variety of industries, under intelligent supervision, as will enable all persons so far restored as to be able to work to not only earn their own living, but accumulate something to the credit of themselves or dependent families. It contemplates a more or less protracted residence in such colonies of persons committed, and an unremitting supervision of colonists on parole, authorizing immediate return, for increasingly longer terms, on violation of conditions constituting the

basis of privileges granted, so long as the colonist remains within the jurisdiction of the State:

As neither time nor inclination permits a more elaborate presentation of such State provision for the suppression of inebriety, and cure of inebriates, as I have mentally evolved from materials of observation, memory and reflection, I will content myself with the suggestion that such provision should not be regarded as punitive in any sense, but benevolent and beneficent in every feature.

It will require, perhaps, more than one "campaign of education" to interest "statesmen" in such a scheme, but once tested I have no doubt of its success, and that the end will have compensated the labor.

TWENTY-ONE YEARS' EXPERIENCE IN THE NON-ALCOHOLIC TREATMENT OF DISEASE.

Read in the Section on State Medicine, at the Forty-Seventh Annual Meeting of the American Medical Association at Atlanta, Ga., May 5-8, 1896.

BY J. H. KELLOGG, M.D.

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On becoming connected with the Battle Creek Sanitarium, an institution of which I have had charge for the last twenty years, and having been connected with the institution for a year or two previous, I established a rule that alcohol should not be relied upon as a therapeutic agent in the treatment of curable cases; that, if used at all, it should be only in those cases which were utterly hopeless, and in which it would consequently be useless to withhold any agent which would afford even temporary relief to the patient's sufferings. These cases have been so exceedingly rare that it may be said that alcohol has been absolutely discarded as a therapeutic agent under any and all circumstances, in this institution, although it had been previously used, sparingly.

The total number of patients treated during this time, of which careful records have been kept, is 16,869. In addition to this, a considerable number of cases who have not been inmates of the institution have been treated by myself and my colleagues in the city and surrounding country, and in dispensary practice in connection with our medical mission in Chicago, of which less complete records have been kept.

The majority of cases treated have been persons suffering from chronic diseases. As the larger proportion have been sent to the institution by their attending physicians, it is scarcely necessary to state that they have been cases of more than ordinary gravity, requiring advantages which they could not receive at home.

A city of nearly twenty thousand inhabitants, in which the sanitarium is located, affords opportunity for a limited observation of acute disease. In the twenty-one years I have been connected with the institution, however, myself and my colleagues have treated 333 cases of typhoid fever in persons of all ages, with nine deaths, or a mortality of 2.7 per cent. Within the same time we treated eighty-two cases of pneumonia, with four deaths, or a mortality of 4.9 per cent. When we recall the fact that under the alcohol treatment of pneumonia and typhoid fever, the mortality rate has been 30 and 20 per cent. respectively, I think it will be conceded that our patients have in no wise suffered in consequence of the disuse of this drug.

Alcohol is much less used in the treatment of chronic maladies at the present time than formerly, but many physicians still cling to the idea that alcohol is a stimulant, a nutrient, or in some way a supporter of vitality, and hence prescribe it in a variety of morbid conditions which are more or less chronic in character. I have demonstrated to my satisfaction the absolute inutility of alcohol for the accomplishment of any useful purpose in the treatment of either chronic or acute maladies.

One purpose of this paper is to call attention to other measures which may be used in the place of alcohol as a means of meeting the therapeutic indications which alcohol has been supposed to meet, but which experiments made by Dr. N. S. Davis long ago, and in recent years confirmed by numerous investigators, have shown it to be entirely incapable of meeting.

ALCOHOL AS A CARDIAC STIMULANT.

I have never found alcohol necessary in any case as a

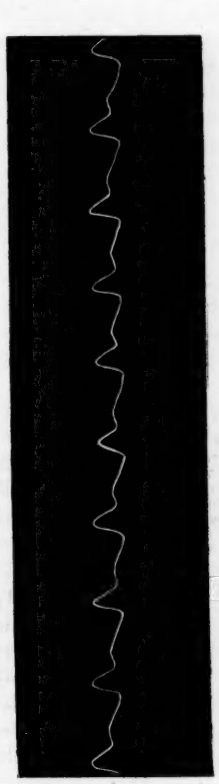

FIG. 1.—Sphygmographic tracing of a patient before taking a spray at a temperature of 80 degrees F.

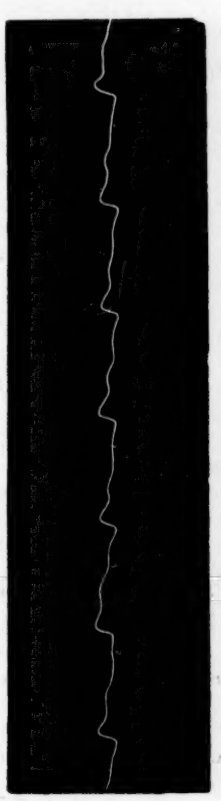

FIG. 2.—Sphygmographic tracing of a patient (same as Fig. 1) after taking a spray for two minutes at 80 degrees F., with a pressure of twenty pounds.

cardiac stimulant, and all recent physiologic experiments respecting the effect of alcohol upon the heart go to show that it lessens its force rather than increases it; or, in other words, is a depressing agent rather than a tonic or stimulant. The cold shower bath is one of the most powerful of all means of stimulating cardiac activity. The application of cold water to the surface of the body produces an immediate increase in the strength of the pulse. This is very clearly shown by the sphygmograph, with which I have made a considerable number of tracings for the purpose of demonstrating the influence of peripheral applications of cold upon the heart and circulation. The cold shower bath, however, is by no means applicable in every case, neither is it always convenient. Cold may be applied to the skin in many other ways, as by the cool sponge bath or the short cold full bath; and the force of the application can be graduated to a nicety by varying the temperature of the water employed,

the length of the application, and the extent of surface to which the application is made.

The application of cold to the surface produces its effect upon the heart, both through its influence upon the peripheral blood vessels, and by means of a reflex action through the afferent vasomotor nerves and the sympathetic system. The effect of these peripheral applications upon the heart being almost instantaneous, it is very easy to graduate the dose to suit every possible case in which increased heart vigor is required.

The accompanying reproduction of sphygmographic tracings taken by my friend and colleague, Dr. W. H. Riley, very well show the influence of the peripheral application of cold as a cardiac tonic.

Alternate hot and cold sponging of the surface, or hot and cold sponging of the spine, short applications of dry heat over the heart, are also measures of value suited to particular cases. One would not apply cold to the general surface with the skin in a cyanotic condition or wet with perspiration. In such cases, vigorous hot and cold applications to the spine, hot fomentations over the heart, or general hot sponging immediately followed by a brief cold application, would be more appropriate. Drinking of hot water, the hot enema, and the alternate hot and cold foot bath, even the placing of the hands alternately in hot and cold water, are measures which operate powerfully in increasing the vigor of the heart. The value of applications of this sort in reviving the energies of the flagging heart are more clearly seen in cases of syncope, threatened death from chloroform, ether, cocain, opium, and other narcotic drugs, including alcohol.

I shall never forget the impression made upon my mind by a case of opium poisoning to which I was called some twenty years ago. Half a dozen physicians who were in the room had been applying various remedies, all without avail. I was sent for to bring galvanic and faradic batteries. I found the patient with respiration four a minute, pulse rate twenty, but very irregular. The breathing was labored. The patient had doubtless been unconscious for eight or ten hours. The electric applications slightly improved the pulse and respiration for a short time, but the patient quickly relapsed, and I then resorted to hot and cold applications, applying fomentations the whole length of the spine for one minute, then removing the hot cloths and rubbing the bare skin from occiput to sacrum with ice for ten or fifteen seconds, then reapplying the fomentations. In less than three minutes a change in the patient was noticeable. Perspiration appeared, respiration was increased to sixteen per minute, pulse rate to fifty, the patient moved about in bed, and even uttered a few words, to the astonishment of every person in the room. Although in this case the patient ultimately died, the wonderfully stimulating effect of the revulsive applications to the spine in arousing the activity of the cardiac and respiratory centers was apparent to all present.

I believe I have saved the lives of a number of persons under similar circumstances, by the use of this simple but wonderfully powerful measure.

The most powerful of all means of stimulating the heart is the alternate hot and cold spray or shower bath, applied to the whole surface of the body. In cases of chronic cardiac weakness, applications of this sort must be used with care. In some cases only the gentlest hydrotherapeutic measures should be employed; centripetal friction and carefully graduated joint movements should be depended upon as the most efficient means of gradually developing cardiac vigor.

I have, by the careful use of massage and the Swedish movements, frequently succeeded in bringing a patient suffering from cardiac insufficiency, from what seemed to be the very brink of the grave, to a condition of comparative health and vigor.

ALCOHOL AS A STOMACH TONIC.

In cases of chronic dyspepsia, the use of alcohol seems to be particularly deleterious, although not infrequently prescribed, if not in the form of alcohol or ordinary alcoholic liquors, in the form of some so-called "bitter," "elixir" or "cordial." Nothing could be farther removed from the truth than the popular notion that alcohol, at least in the form of certain wines, is helpful to digestion. Roberts showed, years ago, that alcohol, even in small doses, diminishes the activity of the stomach in the digestion of proteids. Gluzinski[1] showed, ten years ago, that alcohol causes an arrest in the secretion of pepsin, and also of its action upon food. Wolff[2] showed that the habitual use of alcohol produces disorder of the stomach to such a degree as to render it incapable of responding to the normal excitation of the food. Hugounencq[3] found that all wines, without exception, prevent the action of pepsin upon proteids. The most harmful are those which contain large quantities of alcohol, cream of tartar, or coloring matter. Wines often contain coloring matters which at once completely arrest digestion, such as methylin blue and fuchsin.

A few years ago I made a series of experiments in which I administered alcohol in various forms with a test meal, noting the effect upon the stomach fluid as determined by the accurate chemic examination of the method of Hayem and Winter. The result of these experiments I reported at the 1893 meeting of the American Medical Temperance Association. The subject of experiment was a healthy young man whose stomach was doing a slight excess of work, the amount of combined chlorin being nearly 50 per cent. above normal, although the amount of free hydrochloric acid was normal in quantity. Four ounces of claret with the ordinary test meal reduced the free hydrochloric acid from 28 milligrams per 100 c.c. of stomach fluid to zero, and the combined chlorin from .270 to .125. In the same case the administration of two ounces of brandy with the ordinary test meal reduced the combined chlorin to .035, scarcely more than one-eighth of the original amount, the free hydrochloric acid remaining at zero. Thus it appears that four ounces of claret produced marked hypopepsia in a case of moderate hyperpepsia, whereas two ounces of brandy produced practically apepsia.

There would seem to be no further proof needed that alcohol is of no use in the treatment of disorders of digestion. Indeed, Dr. Roberts asserts that alcohol is useful only as a means of hindering digestion, which he considers a very important function in it, owing to the tendency of excessive alimentation, especially in the excessive use of meats. Dr. Roberts' recommendation is perfectly consistent with the results of this investigation, so far as the effects of alcohol are concerned, although it would seem to be more sensible to suppress the excess of nitrogenous foods, or the total

[1] Arch. f. Klin. Med., 1886.
[2] Zeitschrift f. Clin. Med., 1889.
[3] Lyon Med., 1891.

amount of food taken, rather than to indulge in the use of a drug to act as a disturbance and hindrance to the digestive process. The disorders of digestion are easily managed by the rational employment of dietetics in connection with a careful investigation of the stomach fluid by the exact chemic and bacteriologic methods with which we are now acquainted.

Roberts has also shown, and the writer's experiments verify his conclusions, that wines, beers and similar liquors, in even comparatively small doses, prevent the salivary digestion of starch in the stomach. Thus it appears that stomach digestion is altogether interfered with, and inhibited by alcohol in any form.

ALCOHOL AS A TONIC OR STIMULANT.

Nothing could be more absurd than the use of alcohol or alcoholic preparations in the production of so-called tonic effects. Far from being a tonic, alcohol is not even a stimulant. Recent investigations show clearly that the drug is a narcotic and a sedative rather than a stimulant. In a paper presented before the American Medical Temperance Association three years ago, I gave the results of psychologic tests made upon a number of persons before and after taking alcohol, by which I showed that the reaction for the tactile and the temperature sense were both diminished more than 100 per cent., while the muscular strength was diminished more than 30 per cent. Alcohol benumbs nerve structures of every sort, and does not in the slightest degree increase either mental or nerve activity. Nothing could be more absurd than the common prescription of alcohol or of such mixtures as Vin Mariana, when tonic effects are desired. These drugs are simply nerve foolers. They lessen nerve sensibility and thereby diminish the sense of fatigue, exhaustion, weakness, or whatever discomfort may exist.

ALCOHOL AS A NUTRIENT.

It has long been known that the use of alcohol diminishes the elimination of proteid substances in the excretions. This was thought to be an evidence that, if it were not an actual food, it was at least a means whereby tissue degeneration might be lessened and thereby the bodily waste diminished. Careful investigation of this matter shows, however, that alcohol does not actually diminish the amount of the products of tissue activity, but that it prevents their elimination, so that they remain in the tissues.

It is only recently, since the subject of leucomains, ptomains, and toxins has come to be appreciated from a practical standpoint, that the full significance of the diminution of tissue waste under the influence of alcohol could be understood. Instead of being an evidence of tissue preservation, this lessening of the elimination of tissue waste is simply an evidence of the accumulation of waste and poisonous substances within the body, through the lessened efficiency of the liver and the kidneys.

In an experiment made a year or two ago, I found the coëfficient of urinary toxicity to be diminished 50 per cent. in the case of a vigorous young man, by the injection of two ounces of brandy. As I argued in a paper presented at the last meeting of the American Medical Temperance Association, this fact is one of profound significance in relation to the use of alcohol in such infectious maladies as typhoid fever, diphtheria, pneumonia, and similar disorders. In these diseases the system is struggling under the influence of poisons, which the liver endeavors to destroy and the kidneys to eliminate. By lessening the efficiency of the kidneys as eliminating organs, and the liver as a disinfecting organ, it is evident that the risk of death must be considerably increased; hence the use of alcohol in cases of this sort must be condemned.

When we remember that in the majority of chronic cases, as well as most acute maladies, the system is suffering from more or less pronounced toxemia, through the failure of the liver, kidneys, lungs, skin, and other eliminative organs to do their full duty, it becomes apparent that the use of alcohol must be not only detrimental, but in many cases even absolutely dangerous.

The patient suffering from dilatation of the stomach is continually in a state of toxemia, through the development of ptomains, as the result of too long retention of food substances in the stomach, and the consequent action of germs of various sorts upon the food elements. As a rule, a patient suffering from an acute disease requires simply good nursing and such treatment as will aid nature in the elimination of poisons to which the most active symptoms are due. In the treatment of chronic disease, the patient requires not only increased elimination of poisons, but the adoption of such measures as will suppress the development of these poisons, such as careful regulation of dietary, and maintenance of an aseptic or germ-free condition of the stomach. The system of the invalid needs to be generally reconstructed. This requires tissue renovation and regeneration. The use of alcohol in such cases, then, must be evil, and only evil.

I should not omit to mention the Turkish bath and similar therapeutic means, as one of the most effectual means of accomplishing the tissue reconstruction necessary for the cure of various chronic disorders, and particularly that class in which alcohol is so freely prescribed, and most of all in cases of alcohol addiction, in its various forms.

SOME NOTES ON ALCOHOL IN THERAPEUTICS.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY T. D. CROTHERS, M.D.

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Some very strange conceptions of alcohol as a medicine exist, and are repeated in really excellent text-books of medicine. Evidently they are the repetitions of assertions of authors which have been accepted without question.

One of these precepts is to increase the amount of spirits if the smaller doses do not seem to have the effect desired.

In a given case one ounce of brandy every four hours is increased to the same amount every two hours. Spirits are said to be indicated and the dose and frequency is the measure of its power.

Recent text-books urge that spirits be given freely in certain cases and prescriptions containing large quantities of spirits are presented as guides. In some cases cautions concerning the dose and its frequency are given, but the fact is assumed that large doses have certain definite effects that can be studied and understood. These counsels are not in accord with the observed facts, and in some cases diametrically

opposite. Thus the effects of eight ounces of spirits a day is not double that of four ounces. Where spirits are taken as a beverage the man who drinks a pint of any kind of spirits does not manifest symptoms of double the intensity to one who uses half a pint. Observation seems to be conclusive that a point of toleration is reached beyond which there is no appreciable effects from spirits. In a case of diphtheria an ounce of spirits was given every two hours; this was increased to every hour without showing any alteration in the heart's action except a temporary fluttering. The skin seemed to be intensely stimulated and was bathed in perspiration and the kidneys were active, the exhalations from the lungs were increased, collapse and death followed, and the physician was sure that the poison of diphtheria had overwhelmed the nervous centers causing death. The spirits taken for two days before the end had not been absorbed but had gone on saturating the tissues and forming ptomains which were literally poison centers of greater magnitude than the diphtheria germs.

In a case of pneumonia the consulting physician urged spirits *ad libitum* as much as could be swallowed, for the reason that if the heart's action could be sustained he would recover. Of course the patient died. A quart of brandy was given daily. The skin, lungs and kidneys made a great effort to eliminate the poison of alcohol, but failed.

The real facts were, the process of inflammation which would have been self-limited, was supplanted by paralysis and the presence of a new source of poisoning of greater magnitude than the primary disease.

Beyond a certain point not clearly recognized alcoholic saturation begins and the effects of spirits after this time is not apparent except in general progressive depression and enfeeblement. At times this point of saturation is manifest in vomiting with excessive stomach and brain irritation. This may go on to what is termed delirium tremens and various manias, marked by cell and nerve exhaustion, with explosions of nerve force.

There can be no doubt of the cumulative action of alcohol in health, even when used in small doses and for long intervals. In disease of any form there are no reasons for believing that this effect is prevented or neutralized. The assumption that the anesthetic action of alcohol increases in proportion to the size and frequency of the dose or that any action it may have on the organism likewise increases, beyond a certain point, lacks clinical proof. In my opinion alcohol and its ptomains accumulate in the tissues, and are gradually eliminated beyond the danger point by purely natural processes. This process of elimination has a limit, which varies widely in different persons and is unknown. In disease it is feebler and is reached sooner than in health. The supposed tonic effect of alcohol is no doubt a poison of extreme fatality after a certain period. The point of saturation is reached in which the direct irritant and paralyzing action of alcohol, has reached an extreme limit. Beyond this spirits become a pure chemic poison. The center of new combinations of foreign products, that are not eliminated, but held in obeyance, until some unknown condition expells them, or draws them into the circulation. The clinic experience of the sudden death of persons who are using as a beverage or taking as a medicine large quanties of spirits seem to confirm this view of the sudden absorption of alcoholic products beyond the power of resistance.

A strong man suffering from acute pneumonia had been taking over a pint of brandy daily for eight days. He was given a warm bath and an enema to clear out his bowels. An hour after he died suddenly. In my opinion the bath and enema had roused the absorbent to activity, and the accumulated alcoholic poisons had been absorbed to fatality. Before this the general palsy of the tissues had prevented the absorption of the poisons. Had all the alcohol been withdrawn and the process of eliminating been slowly stimulated this result would have been averted.

In the cases under my care alcoholic paralysis is treated with hot showers and hot air baths accompanied with saline drinks. In most cases this is followed by sharp reaction; a few hours after generally stupor and prolonged semi-partial coma. This I assume to be the absorption of the alcoholic products which have been accumulating in the past. The remedy for which is increased hot showers and hot air baths. This reaction is in some cases sudden delirium and hallucinations or strange morbid impulses. The alcoholic ether odors continue for days after the spirits are withdrawn, which seems additional evidence of this condition. I think the process of gradual reduction of alcohol either in medicine or the treatment of inebriates in direct opposition to experience and rational theory.

On whatever theory spirits may be given as a medicine, to gradually diminish the size of the dose and increase the interval of time of giving it, is without reason or judgment. Whatever special effect of alcohol may be desired, the attempt to reduce this down to a minimum in decreasing doses, is purely fictitious.

In a case of typhoid fever where large quantities of spirits had been given and recovery began, great stress was insisted to discontinue the spirits in decreasing doses. Death followed and no intestinal lesion could be found, hence the diagnosis heart failure. In my opinion it was alcoholic poison, with sudden absorption of accumulated products directly due to spirits. Some of the facts I wish to emphasize are first, anesthesia of spirits has a limit, beyond this there is saturation and accumulation of unknown chemic poisons, of great fatality. The toleration and fatality of excessive doses of alcohol in both health and disease, point to some unknown conserving force and capacity of elimination of great power. The sudden deaths which follow in these cases are additional evidence. The practical fact confirmed in many ways is that whatever the physiologic action of spirits may be, its action is limited, and does not increase beyond a certain point, that the effects on the body are cumulative, principally chemic products that are not readily eliminated.

These and other effects from alcohol seem to check elimination beyond a certain point, and become very dangerous. The exhaling of alcoholic ethers from the lungs is significant of saturation and crossing the danger line that should be heeded. In my opinion there is no remedy known of such uncertainty, and physiologic danger as alcohol. The need to-day is a new critical analytic study of the entire subject of alcohol in therapeutics.

Enormous Sac of Pus in Abdomen.—Eleven liters of thick, green, sterile pus were removed from an enclosed sac in the abdomen of a young female by Maydl of Prague, in which the uterus and annexes had been floating. Complete afebrile recovery.—*Wien. Klin. Rundsch.* August 2.

TEACHING TEMPERANCE IN PUBLIC SCHOOLS.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY CHAS. H. SHEPARD, M.D.
BROOKLYN, N. Y.

That the temperance problem is fraught with imminent consequences both to the present and future generations, none can deny. The educational method of dealing with the subject commands itself to all, for if it is studied from a purely scientific standpoint, then whatever advance is made will be permanent, and leave no room for an emotional reaction.

The use of narcotics has become such an overshadowing calamity that it behooves all to make diligent inquiry if perchance there may be some way of escape for our people. Not those who give way to such indulgences are to become the permanent inhabitants of our land, for such conditions do but bring about an inferiority and degeneration that eventually and surely leads to extinction. We also well know that by studying and obeying the laws of life and health, the term is lengthened and its enjoyment enhanced.

This is a subject that comes home to every man of family. All right-minded parents desire to give their children the best opportunities for the struggle of life, and even the most besotted are frequently known to make a great effort to have their children shielded from the effects of their misdoing. It is rarely that a father who uses tobacco desires his son to do the same. The young man who is to join in the struggle of a boat race, or foot-ball game, knows that it is incumbent on him to conserve all his powers and not waste them on tobacco or alcohol, and he willingly denies himself to any extent for that purpose while in training, but when it concerns the race of his life, he too often becomes prodigal of his vital energies and makes fearful havoc of what he would give thousands to be possessed of in later years, simply because he is not conscious of the injury he is doing to himself.

For this reason it is that the school years are the most important season of the child's life, the formative period, and if at that time basic truths can be inculcated, he will be more likely to avoid many errors and grow up to a more vigorous and useful manhood.

We know that every great emergency brings a man to fill the gap. In this case it was a woman, Mrs. Mary B. Hunt, who has made it her life work to forward this object, traveling over a large part of the United States in its advocacy. Associated with her as an advisory board, are some of the noblest and ablest minds in the land. Through her persevering and unselfish efforts, all but five of the States in the Union have enacted laws requiring scientific temperance to be taught all the pupils in their public schools. Canada has also listened to her voice, and enacted similar laws, and her influence has extended to several of the European governments, notably France, England and Russia.

The saloon element in the cities of New York and Brooklyn is so dominating that it was not strange that a strong opposition was developed, and in some of the daily papers, ridicule was thrown upon the work. But no sane man will maintain that there is anything preposterous about the study of physiology. On the contrary, after mastering the "three Rs" there is no more important study in the curriculum, and the reporters who attempted to ridicule this study were never more mistaken, for it is a well-meant and well-digested plan, and has the sanction and support of some of the best and most self-sacrificing people in the land. It is as surely bound to succeed as the right is to come uppermost in the not very remote future. It is undoubtedly true that the temperance movement is to be promoted more thoroughly and rapidly by an educational course than in a prohibitive way, and it will be like "kicking against the pricks" to oppose the instruction of our children in the action of alcohol and other narcotics.

If a child can be made to understand that the purpose of the stomach is the digestion of his food, and that by its thorough digestion, impeded by no irritating or debilitating element, the vigor of the system can only be maintained, and if it is shown that the use of alcohol impairs all the functions of the stomach and predisposes to disease, he will as much hesitate to use stimulants as he would to use arsenic or any other poison.

Let any unprejudiced man who loves his race observe what a vast amount of effort is given to the production and use of alcoholic drinks; how it permeates every class of society. So, also, the use of tobacco and other narcotics. Are we, as a people or nation, benefited by them, or are they a hindrance to our progress and development? The frequent death of a victim of the cigarette habit would argue that our children could easily find a more profitable field of effort. Many of the parents may be astonished when the children come home from school and tell what they have learned about the effects of the moderate use of alcohol and tobacco, but if it be true, we have not found it out any too soon. The books that have been compiled for use in the schools have had the revision of some of the ablest physicians in our land, and they will stand the test of scientific examination. Dr. Crothers, the eminent specialist in inebriety, says, "I have spent some time on the school books mentioned, and I have not found errors or extravagant statements."

If the facts contained in these books are not adapted to the comprehension of the children who are taught, it shows that the teacher has mistaken his calling. The question of the use of alcohol and other narcotics is one that is sure to come up for discussion more and more, and will never be quieted until it is settled rightly. If it is well for physicians to prescribe narcotics, then should the manufacture and sale be encouraged in every legitimate way. On the contrary, if their use is evil, and evil only, as some scientists claim, then all should know it, that they may avoid the pitfalls, and in no more holy ground can this knowledge be placed than in the minds of our children.

It would not be possible for the race to continue many generations longer in the free and increasing use of narcotics, for it would produce degeneration and wide-spread disaster. The light of science, which is simply increasing knowledge, will dissipate the clouds that now hang over us, and usher in the new era to a regenerated mankind. For these and many other reasons, we are satisfied that the law directing this study by the school children is a most laudable one, and should be encouraged by every right-minded person. It can be opposed only by the saloon element, and its strongest supporter, the moderate drinker, who can not too soon become aware of the

error of his ways. He needs education, not prohibition. If he is past learning anything new, his children are not.

The impressions made in our childhood being the more permanent, lead up to the fact that if our children can be taught the truths about alcohol and other narcotics, the time will eventually and surely come when their daily use will be abandoned.

DISCUSSION ON PAPERS OF DRS. EVERTS, KELLOGG, CROTHERS AND SHEPARD.

DR. GROSVENOR—If alcohol is not a stimulant, then why do we observe the flushed face, the increased intellectual activity, the elevation of temperature, the increased muscular power and the general feeling of well-being which persons, especially the weak and feeble, experience while under the influence of alcohol?

DR. KELLOGG—Alcohol may be very aptly termed a "nerve-fooler." Its effects are in a high degree deceptive. It makes a man who is cold feel warm, while the thermometer shows that his temperature is actually lower under the influence of the drug; it makes the weary man feel rested, and the weak man strong, whereas the muscular strength is actually less under the influence of the drug than before.

In experiments which I reported at a meeting of the American Medical Temperance Association held in Milwaukee two years ago, I showed that the man whose total strength as registered by the dynamometer while in his normal condition was 4,800 pounds, fell to 3,300 pounds under the influence of two ounces of whisky; the depreciation of nearly 30 per cent. makes a man imagine that he is stronger than ever before. Careful psychologic tests which I have made with various instruments of adaptability to the purpose, demonstrate how the tactile, the temperature sense, the sense of weight, etc., are all diminished from 30 to 50 per cent. under the influence of alcohol. A man is more talkative than when in his normal condition, but he uses less discretion in the selection of words. There is an evident lack of intellectual balance.

Under the influence of alcohol the face is flushed, because of the paralyzing and depressing influence upon the vasomotor sense, causing the laceration of the small blood vessels. Prof. Ayres' remarks, that if this were not proven, the surface should be red with blood after death instead of pale, is most absurd, for the reason that every physiologist knows that in death the heart ceases its action before that of the vessel, so that the blood is impelled on into the veins, and the arterial system is completely emptied. This surface cyanosis does not appear until the blood has passed on into the larger veins.

Professor Bunge and most of the authorities pronounce alcohol to be a depressor. Professor Reichert's experiments upon a frog's heart show alcohol to be a depressor. This question is scarcely at all discussed among physiologists, for the reason that recent experiments have been conclusive in establishing the fact that alcohol is a depressing agent, and in no sense a stimulant. It is true, that when first introduced into the body, whether by the stomach or hypodermically, alcohol seems to act as a stimulant. This is due to its irritant effect upon the nerves, whereby a reflex stimulating influence is produced, the same as would be produced by a plaster, a caustic, a hot iron, or any other irritating agent; but as soon as the drug enters the circulation and comes in contact with the nerve centers, its true physiologic effects appear, and there can be no question that these effects are those of a depressing agent, and not those of a stimulant.

DR. GROSVENOR—I have observed the different classes of drinkers, and I have noted the character of the drink which they take and I have never been able to tell by the coloring of the countenance of the drinking man whether he was a beer drinker or a strong drinker.

DR. KELLOGG—I think the temper has very much to do with this. Beer drinkers are thick skinned. So are certain classes of people that are pale while embarrassed, while there are classes who are flushed while embarrassed. There are some who turn pale while still flushing. I am told that is one reason why beer drinkers are more likely to be florid than pale, because the attack is upon the nerve centers, while in the strong drinker there is a reflex action so that the vessels are contracted.

THE CHAIRMAN—I merely wish to add the evidence of what little experiment I have made. I have found that the white corpuscles in some were vastly increased by the use of alcohol. If you put them under the microscope you will find that the red have been supplanted by the white, which was due to the toxin poison, which accounts for the difference in the pale and florid faces.

DR. KELLOGG—Speaking on this subject, I have been disappointed in the results of experiments, more than of the blood in strong drinkers. I have been connected with a missionary movement in Chicago, in which we had 450. We have a little church in the center of the city, and use it for a lodging house, and to catch drunkards in. Most of the men who come there are drinking men. We have a penny lunch counter, free baths and a laundry, and I made last year a careful study of 100 drunkards, 100 hard cases. I am very sorry to be obliged to report the fact that I found very little difference between their blood and the blood of normal character. There was some tendency, of course, to white blood corpuscles, but that was in cases of persons addicted to drinking beer, in which cases the blood is somewhat diluted. I think, too, there must be some other change in the blood than the change of corpuscles. We had no doubts, however, of the red corpuscles. But upon corpuscles of this kind we had small proofs, for the blood has peculiar resisting power against alcohol. Being sent directly into the blood, if not for the great resisting power we would be able to see an ill result at any time. And probably alcohol taken into the stomach is simply absorbed. The blood is itself stored up in the liver and passes out into the intestines and is absorbed and goes through the kidneys.

DR. GARBER—I object very much to the use, in Dr. Crothers' paper, of the word stimulant. The author states that in a case of diphtheria it was given freely, and as a result the child urinated more freely and averted trouble. I claim this action of the alcohol was not one of stimulation but one of paralysis. It so paralyzes the nerve centers that the vessels become dilated, if it is the increase of urination.

DR. CROTHERS (Hartford, Conn.)—In Prussia, Austria and in Germany, provisions have been made for drinking people the same as for the insane and the time is very near when we shall in this country be obliged in self defense to take care of those unfortunates and put them in asylums. This is a question we can discuss more thoroughly than the question of respiration, for on the question of respiration we shall differ and put into it our personal experiences; but when we come to great subjects like the care of these unfortunates we can but agree. This is a subject that will be pressed and carried home. What to do with these people who are near to each home circle is a subject upon which too much stress can not be laid. I think Dr. Everts will find long before his work is accomplished that he has undertaken a great work.

DR. QUIMBY—As long as the State institutions, the saloons are State institutions so to speak, if the State cultivates the people in habits of inebriety and establishes schools of drunkenness, which the saloons are, tempting the weak, the young and the foolish into habits of inebriety by her license system, just how long shall it continue to debauch a large percentage of them. If the State is particeps criminis through the laws established by it, she ought to take care of her feeble alcoholic patients. They are all feeble if they drink to excess, and if a man drinks at all he drinks to excess. He has defective qualities and should be taken care of. The law has made him drink or assisted in making him become an inebriate.

DR. KELLOGG—Regarding the paper on the non-alcoholic treatment of diseases, I want to say that the proposition of the paper was to show that there are sufficient means for accomplishing what alcohol is supposed to accomplish. In a great

many thousand cases it has been found entirely successful to treat them without using alcohol.

THE CHAIRMAN—I can add to Dr. Kellogg's statement, that for twenty-five years I have practiced on the non-alcoholic plan and I have been more than gratified with my success, even in the hospital.

DR. WORK—I have not used it for the last ten years except in the preparation of medicine, but not in the way of brandy or whisky or anything of the kind then. I have not prescribed whisky or beer or anything of the kind.

DR. GARBER—I once treated a case of rattlesnake bite without the use of whisky. I was called two miles in the country to see a lady who had been bitten by a rattlesnake. They had sent for whisky, but by the time the whisky came it was impossible for her to retain anything on the stomach, not even the whisky. It was about two hours after the bite, they told me, when I was called in. I used nux vomica and a ligation and cleansed the wound and extracted the blood. I injected a solution into the region of the wound and left the ligature on six hours. In ten days she was out of danger and is living to-day. Not one drop of alcohol was used in that case. I would treat a copperhead bite just as a rattlesnake bite. I learned at school that alcohol was good for most everything. We are taught that in the books, and one of our authors has made a great speech during this session in which he says that 70 per cent. of the cases of typhoid fever will get well without any medicine if treated with alcohol. I failed to see the use of alcohol in those cases. Until our professors teach differently in the class rooms and the authors teach differentlyin their works, it is going to be a hard matter to institute a reform.

THE CHAIRMAN—I had one case come under my observation in the New York hospital, of a man bitten by a species of snake, I think the cobra. He was treated in the most scientific manner and was kept constantly filled with alcohol. They continued that forty-eight hours, when the man died. It has always been a question in my mind as to whether the man died rom the snake bite or from alcohol.

AN APPEAL TO THE FELLOWS OF THE AMERICAN MEDICAL ASSOCIATION IN BEHALF OF DISABLED PHYSICIANS AND WIDOWS AND ORPHANS OF PHYSICIANS, MEMBERS OF THE ASSOCIATION.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY FREDERICK HORNER, M.D.

P. A. SURGEON (RETIRED), U.S. NAVY.

The total number of the fellows of the AMERICAN MEDICAL ASSOCIATION in 1884 according to the JOURNAL, was 4,108. In 1890 the number was 3,779, and in 1894 it was 4,095. From the three groups of figures given embracing a period of ten years, we learn that the growth of this representative body of the American medical profession has been almost at a standstill, though the number of physicians in the United States is about seventy thousand. According to the figures above presented there was a decrease of the ASSOCIATION'S membership of 329, due perhaps, in part, that during this period have been created the Gynecological and Surgical, the Military Surgeons, and the American Public Health Associations, all of which, like the British Medical Association, with its sixty-one branches in England, Scotland, Ireland and abroad are offshoots or branches of the parent association. And yet, such a statement does not allow us to reach the true explanation (as we believe) why the AMERICAN MEDICAL ASSOCIATION has not a larger membership, now that the organization is so complete with its eleven Sections of Practical Medicine, Obstetrics and Diseases of Women, Surgery and Anatomy, State Medicine, Ophthalmology, Diseases of Children, Dental and Oral Surgery, Medical Jurisprudence and Neurology, Dermatology and Syphilis, Laryngology and Otology, and Materia Medica, Pharmacy and Chemistry, and a journal which is the organ now of the medical profession of the United States. If membership with the ASSOCIATION has attained only a minimum number and the majority of physicians have raised the question as to the "*cui bono*" to them individually and to their families, is not the conclusion logical that if membership only involves them in expense during their absence from their spheres of practice, and to some may be an occasion of temptation, a large number of this class decline to enter the ASSOCIATION. Now, our medical brethren in England have wisely incorporated in their organization a section of benevolence, as long ago as 1835–36, a period even prior to the birth of our ASSOCIATION, the members of which have raised thousands of pounds sterling, designated as the British Medical Benevolent Fund. The British Medical Association has since trebled its membership and now has sixteen thousand members; wherefore should not the AMERICAN MEDICAL ASSOCIATION have its "American Medical Benevolent Fund?" Clericals and laymen have theirs, the widows and orphans of deceased clergymen of the Protestant Episcopal Church have had in all a fund of $81,000 for their relief. The operative classes, railroad men, commercial travelers, brewers and distillers, apart from the benefit some may derive from insurance companies, have their own mutual assessment fund; why may not the fellows of the AMERICAN MEDICAL ASSOCIATION? Bishop O. W. Whitaker, in his address at a late meeting of the Mutual Aid Society of Philadelphia said: "A professional man is taught to look after the interests of others before he looks to his own; that is the professional idea and the medical profession has lived up to that idea from the very beginning. As the captain of a ship looks to the safety of his passengers before his own, as the captain of a company of soldiers is willing to die for his country, as the engineer on the engine faces death to save those in his charge, so the true physician is at all times willing to sacrifice himself. A medical aid society has claims for support on the whole community and these claims should be recognized. Finally this recognition of the claims of the widowed and orphaned comes from the Son of God, who by a miracle raised from the dead the widow's son, and commended His own widowed mother to the care of the beloved disciple. Throughout heathendom there is no such sentiment. Jesus Christ taught the world the worth of a child as a child, of a man as a man, and of a woman as a woman. Outside of Christendom, there is no such recognition." In the scriptures as in the records of mankind, are mentioned the wrongs done to the widow and fatherless, evils that we by timely help may contribute to avert. If we fail in such duty, recognized now as a matter of privilege by all classes, the social, industrial and professional, there is One who will not. God, with the force of a commandment in His word says: Leave your fatherless children unto me, and let your widows put their trust in me and in the sweet strains of tenderest melody, comes the assurance "He relieveth the fatherless and widow," but, as Christian physicians let no one fail to remember vital union with the Bestower of life in time and eternity demands of us to recognize as the instruments to provide for the needy, viz., disabled physicians and the widows and the orphans of physicians. The writer could cite any number of examples of worthy physicians who stood bravely at the post

of duty and died, as some did, at Norfolk, Va., in 1855, when the plague of yellow fever decimated the population there, and at the Norfolk Navy Yard and Portsmouth. How common the record is for some faithful physician to be killed by accident—a fall from his buggy, run over by the cars, or as in country practice, drowned in the vain effort to cross a swollen stream and thus injured or perishing leaves a helpless family, if not otherwise destitute, with no accident or life insurance policy, and no stipend contributed by a medical aid society, save in one or two States as in Massachusetts, New York and Pennsylvania, though they may be Fellows of the State and AMERICAN MEDICAL Associations, and physicians of high social and professional rank leaving behind the memories of spotless lives and

"Footprints, that perhaps another
Sailing o'er life's solemn main
A forlorn and shipwrecked brother
Seeing, shall take heart again."

Dr. H. Tuck, Treasurer of the New York Society for the Relief of Widows and Orphans of Medical Men is correct in the opinion that every medical society in the union should have its medical benevolent fund, as well as our National Association, with a united purpose to carry on a systematic method of benevolence annually, however small the stock in hand may be at first. As an example of success may be cited the work of the Royal Infirmary of Edinburgh, Scotland, which shows from the last report that even shilling contributions were accepted among the larger benefactions of the rich, making a total of £4,228, to which were added other sums from public works and establishments, churches, donations, legacies from the counties and cities of Scotland, England, Wales, Ireland and abroad, summing up £9,388, details gleaned to prove how the laity and unprofessional do not fail to make annually a generous and munificent provision for the needy, it may be the insane, and the inebriate. The founders of the Massachusetts Medical Benevolent Society in 1857 can not be too much commended in the declaration that they endeavor to help worthy members of the profession, reduced in circumstances and also their families, should they need assistance and of such other medical members of the society and profession or their families as may be deemed by the society suitable objects of its beneficence, a broad platform on which to do good and worthy of adoption by the Fellows of the AMERICAN MEDICAL ASSOCIATION. But the absolute proof of the trial of an experiment to raise money as a fund for so good a cause, is furnished to the physicians of America by our medical brethren of England as presented by the late annual report of the British Medical Benevolent Fund for 1894–95. The most eminent, noble and titled physicians of Great Britain constitute the officers in charge of this fund: Sir James Paget, Bart., F.R.S., president; Sir William Jenner, Bart., F.R.C.P., Sir Richard Quain, Bart., vice-presidents; trustees, Sir H. Acland, Sir James Paget and Sir Edward Sieveking, Barts.; treasurer, Sir William Broadbent, Bart., M.D., 1884. Bankers, Bank of England.

Honorary local secretaries number seventy-nine, and are located in all the principal cities, towns and counties of England and Scotland and border counties.

This fund the report states is "for the relief of medical men in temporary difficulty or distress and for their widows and orphans, and also, for granting annuities to those who are quite incapable of providing for themselves after sixty years of age. This fund has been in the form of annuities to the aged and of grants of money to urgent cases which required immediate help; such recipients must be members of the medical profession, or their widows and daughters and not less than 60 years of age. The annuities are £20 each, but may be increased to £26 a year, *i.e.*, ten shillings a week; the annuities are paid from the annual income of invested property. Of late years such have been greatly increased by legacies, so that in 1883 the annuities were 51; are now 104. There are special funds, one of £15 for two widows of medical men, and the other £36, to a physician's widow having children to educate. The grants like the annuities are given in monthly installments. Subscriptions for 1894 amounted to £1,083, 14s., 5d., and the donations to £707, 8s., 4d. Grants in sums from £2 to £25, were distributed to 169 applicants. Donations were received from Bath, from the Southeast Branch, British Medical Association of Bristol, the Society of Apothecaries and the Salters' Company; one of the legacies of £500, was from the late Mr. T. M. Stone, Librarian of the Royal College of Surgeons, and the wardrobe, besides £100, was left by will to the Fund. The committee consider the position of the annuity fund safe; a number of applicants could not be relieved because safe investments could not be found, and owing to the falling rate of interest of all trust securities and the low dividend on bank stock; it would lessen the difficulties of collecting the grant's fund for regular subscribers to pay through the bank for which a banker's form of order is given with the report. The collector may be the secretary of the association. The committee appoints medical local secretaries, *e. g.*, Bath, Brighton, Northampton, and in other cities to represent the fund, to collect the subscriptions and to distribute the grants in their respective localities, numbering in all forty-five and including the British Medical Association, Southwestern Branch and South Midland Branch, and great cities—Liverpool being the largest contributor; Edinburgh, Hull, Manchester, Plymouth, Perth, Cambridge and Oxford, Glasgow, Leamington and others. The committee urge that an appeal shall be earnestly made to all interested to make the existence of the fund more widely known and to urge its claims not only upon the members of the medical profession but also, upon others who have the cause of true charity at heart."

In a brief conclusion of this appeal to the Fellows of the ASSOCIATION, we would respectfully claim that an experiment of the kind by the profession in America can not be esteemed an impracticable one in the presence of the facts above presented by the reports of the Massachusetts Medical Benevolent Society, the New York Society for the Relief of Widows and Orphans of Medical Men; the Mutual Aid Society of Philadelphia County Medical Society and of the British Medical Fund Society of England. On the contrary, we claim that now, after a half century's existence of the AMERICAN MEDICAL ASSOCIATION, we firmly believe that to ensure a larger membership with the Divine blessing and to promote a common and widespread fraternity, and to perfect the glorious work of its founders, Drs. N. S. Davis, Chapman, Stevens, John C. Warren, Mussey, Moultrie, Wellford, Gross and others on the occasion of the birth of our glorious ASSOCIATION in 1846, that the capstone needed is the

creation of a section of Medical Benevolence—to be styled by Federal Statute law "The American Medical Benevolent Fund," to be judiciously dispensed for the benefit of disabled physicians and of the widows and orphans of physicians in fellowship with the ASSOCIATION—as donors of the fund, annual contributors or by legacies.

TUBERCULOSIS INFECTION FROM FOOD.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY CHARLES E. WINSLOW, M.D.

LOS ANGELES, CAL.

Preventive medicine to-day, like a gigantic signal light, sends its piercing rays into all the world, guiding medical men upward to a plain above their forefathers which gives advantages unknown before. Old theories have developed into facts, prophecies of the past are now being fulfilled, and hygiene has been clothed in new garments of interest. There is more earnest thought along this line than ever before. We have the benefit of the most advanced laboratory investigations, giving us an understanding of the causes of disease hitherto unknown. With this growing enlightenment comes a greater responsibility and a more urgent need of earnest labor in preventive medicine. Science, as she turns the pages of this new book of knowledge, calls for pure food, pure drink, pure air and better protection from disease and death.

Man seems prone to disease, and of all the ills he is heir to, the most appalling in its dire results is tuberculosis. Like a great octopus it reaches out its tentacles after the human race, blighting all who come within its grasp, sapping the very life blood, making a wreck of noble manhood and bringing misery and despair to its victims. Having a death rate in the United States of over one hundred and seventy-five thousand a year, with one-seventh of all deaths in the world from this dread disease (Harsch), leaving in its wake seeds that will bring care, sorrow and death to thousands more, it becomes a hideous menace to humanity.

There is an increasing anxiety among the thinking medical profession due to the resistance of this disease to the advanced curative remedies, for at present all have come far short in checking the progress of this most formidable of all diseases. Although in respect to curative medicine we are still groping in darkness, the light of progress has illuminated the path of preventive medicine, showing that the enemy must be met and vanquished under its banner.

Comparatively a few years ago a majority of the medical men did not believe in the communicable nature of tuberculosis, but scientific research has proved it beyond a doubt, and the cloud of heredity that has hovered as a pronounced doom over hundreds of lives, shutting out every ray of hope, has been dispelled. Many with the predisposition to consumption have accepted this bow of promise, and by changing conditions have conquered the inherited tendency to the disease, becoming healthy and useful men and women.

That the colonization of Koch's bacilli in the animal tissue causes the disease is the belief of the most advanced investigators. If this be true, beside proving that the disease is infectious, it gives grounds upon which we can work out our own salvation by controlling the spread of the disease. The two great mediums through which it reaches the human system are air and food. While the inhalation of bacilli-laden air affects the lungs more largely, tubercular food usually causes the infection through the bowels. The food of a people is its strength; a poorly fed will be a demoralized people. The more wholesome the diet the stronger is the nation. Among the food products none take the place of milk. There are produced in the United States nearly five and a half billion gallons of milk, more than one billion pounds of butter, and nearly nineteen millions pounds of cheese. How important that an article which forms such a large proportion of the food of the people of this country should be pure and wholesome. Tuberculosis is disseminated more largely through its agency than that of any other food.

The most common disease of the cow is tuberculosis. The close relation that exists between the cow and the human family render it possible for the spread of this frightful disease, and for man's best friend to become his worst enemy. Some writers have claimed that the only nations in the world free from tuberculosis are those that have not domesticated the cow, and that this disease is perpetuated by the domestic cattle. That this is no imaginary danger, but real and menacing has been repeatedly proved by experiment and research.

Human beings and the lower animals, living upon the milk from tuberculous cows, have contracted the disease. In one experiment seven out of twelve calves, and two out of five guinea pigs, fed with diseased cow's milk, developed tuberculosis, while the milk from seven cows infected seventeen animals out of eighty-seven inoculated. Obermuller found that out of forty guinea pigs, into which milk bought from dealers was injected, three became affected and died. In his experiments, using centrifugalized milk mixed with the cream of the same milk, ten out of sixty guinea pigs were infected. Roth and Broferro infected guinea pigs from butter made from the milk of tuberculous cows. In 55 per cent. of the experiments the milk from cows having tuberculosis has conveyed the disease to the lower animals. (Ballinger.)

Numerous cases have been reported before the societies where physicians have directly traced the disease from the cow to the human being. It exists to an alarming extent in our large dairies. Very little milk reaches our cities free from mixture with milk from tuberculous animals. (Bush.)

From 5 to 10 per cent. of the slaughtered animals have tuberculosis. The cooking of the meat used for food lessens the danger of infection from that source. The bacilli introduced into the system may migrate to different parts of the body, forming here and there little colonies, the lungs being most often the seat of attack, the digestive tract next. The infection of the intestinal tract by tuberculosis is more common among children than adults. The increasing cases of tuberculous joints, meningitis and infected bowels and glands in childhood can be largely accounted for by the use of diseased milk.

The majority of people are not predisposed to tuberculosis; the immature child and the invalid are most susceptible to the disease. The bacilli rarely find a home in a healthy human organism. Anything that depletes the system leaves it in a condition to become infected; therefore an impure diet of any kind tends toward tuberculosis, while good, wholesome food will

aid in throwing off the disease. The food of a human being may be full of the bacilli and still the system be so nourished that it will not retain the germs. While this may be true, still if the bacilli can not gain entrance into the organism there will be no danger of infection.

Tuberculosis is not so contagious as many diseases, but it holds its victims more firmly in its grasp than almost any other enemy of mankind. And yet this curse of the human race can be prevented. To accomplish this there must be strict sanitation. More and more attention is being given to the subject, not only by the physicians but by the people at large. To-day the hygiene of our cities is one of the great questions which municipalities have to deal. The sale of food that is infected with disease should be restricted and the punishment made so severe that the dealer will fear to sell such food. Each community should have an inspector, whose duty shall be to carefully examine all food sold. Some of our cities have greatly improved the quality of their milk supply by so doing. Sterilizing milk lessens the danger.

Milk containing tubercle bacilli is a diseased product. Wherever there is this microörganism there is tuberculosis. No tuberculous animal can give pure milk, the disease must affect all the organs of the body. Every cow, private or dairy, should be examined for tuberculosis and other diseases by an expert, and the milk of every new cow entering a herd tested before a drop of it is used. The inspection should be periodical, and carefully and systematically made. There should be a physical examination and the tuberculin test should be used, for it has been proved that milk from cows, which give no physical signs, is often infectious. Although Koch's tuberculin has not been a success as a thereapeutic agent, it has proved a useful aid in the diagnosis of tuberculosis, and no herd can be thoroughly inspected without its use. The healthy cows should be marked, and all tuberculous animals, no matter how slightly affected, destroyed. It is a serious matter to go into a man's herd and kill his cattle, but it is pernicious to let such animals live, a menace to a community.

Not only should the cow be inspected but its treatment and surroundings. The animal from which milk is taken should have the best of care, be fed wholesome food and have stables and surroundings neat and comfortable. The utensils used for holding milk, making butter and cheese should be clean and free from dust. No person suffering with tuberculosis should be employed about a dairy, creamery or where food is prepared or sold.

Only milk and its products from inspected dairies should be placed on the market. There should be abattoirs where the slaughtered animals could be examined by competent experts, and no market should be allowed to sell meat which does not have the inspector's tag.

All articles of diet should be kept from contaminating dust. Even the wrapping paper may infect healthy food. Eating utensils used by consumptives should be disinfected.

Inspection is a necessity. To make it a success the inspectors should be educated men and their decisions enforced by law.

The cost of sickness is great, so immense that we fail to grasp its magnitude, nor can we form a proper conception of the annual financial loss to the nation from this king of terrors. Every life has a financial value, every life saved is so much gained for the community. The child who dies before he is able to be a wage earner, is a loss of just so much as has been expended on him and what he could have earned had he lived. When a man dies of this disease it is not alone the expense of his sickness and the value of his wages that are lost to the world, but the time of those who cared for him, and the expense of the expanding influence of the disease he has left behind him.

With the wonderful development of our country comes increasing danger of infection from the foreign element which, absorbed by our people, by its lack of ordinary sanitary precautions aid in spreading disease. There is a demand for better means of protection.

Every charitable institution in this land is an unconscious recognition by the people of the importance of sanitation and teaches that man should not live for himself alone, but for humanity. It is our duty as physicians to devise means for the amelioration of the human race.

Progress in preventive medicine has given us facts that prove the danger and has shown us a logical means of prevention. With this light to aid us we must impress the truths upon our fellow men.

The people are thinking about these things and are increasing in knowledge; public opinion in all its unmeasured power is slowly progressing.

Education and a wise use of education will do much, but an educated people can not do all. There must be a willing government to enforce. The growth of sanitary science calls for advancement in controlling sanitation. State and local authorities can not shirk the responsibility; they are bound to protect life from the danger of death by disease, as from rapine and murder, no matter how great the expense. For a municipality to pay no attention to the sanitary condition of the community is to become the abetter of crime. Some of the States have taken up the subject and their health officers have done noble work in checking the advance of disease, but in order to do the greatest good to the greatest number there must be more legislation in favor of sanitation. There must be intelligent men at the outposts, guarding hamlet and city, a united action along the line, with a master mind at Washington advising and controlling the entire force.

When advancing civilization shall recognize justice to humanity and give place among our Presidential advisers to a man of science who will guard the common safety and welfare of our nation, lessening sickness and want, sorrow and suffering, wasting and death, then may we hope to see science triumph over disease.

MODERN RESPIRATORY ADVANTAGES.

Read in the Section on State Medicine, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY W. T. ENGLISH, A.M., M.D.

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The worker in the domain of preventive medicine often has occasion to feel that there are excuses for becoming pessimistic and for regarding his efforts as unprofitable. After some acute outbreak of disease, his heart is wrung with disappointment and his mind is distracted. A good remedy for such hypochondri-

asis is to rehearse for himself, or have another review for him, some of the modern respiratory advantages, and trace them to their source. All men are not alike possessed of the "vision and faculty divine," but that man must be indeed prosaic whose soul is not inspired with gratitude and whose heart is not uplifted with hopefulness as he beholds the human body rapidly and surely raised from the abnormalities of life, sublimated, refined and sacred through the avails of modern respiratory advantages. The individual who labors in the realm of preventive medicine is habituated to a life amid the vapors of melancholy and disease, and if no sudden or colossal change dispels those vapors, his mental visualizing is rarely illuminated. However, his efforts are continuously transforming the gruesome abiding places of disease into palaces of good cheer, and he is creating an improved state of existence for himself and his generation. The influence ceases not, but it steeps in splendor the distant human prospect and reaches out its long arms like a benediction toward the ages that are yet to be.

The solicitude with which he guards the youth from the moment he leaves the nursery is like to the fabled spirit of good that keeps from all evil. So unremittingly has he demonstrated the ill influences of bad air and advocated the benefits of good respiration that the school curriculum has been extended to include a study of the laws which govern the respiratory organs, with those which govern other material things. By the intelligent application of the laws of respiration, which the schoolboy is thus taught to understand, there is not only a continuous development of the breathing apparatus, but an extension and versatility of its functions. The schoolboy of to-day knows better how to breathe than does his grandsire. In him is awakened an appreciation of the fact that the respiratory organs were never intended to act as involuntary parts of the body, and it becomes a portion of his daily care to observe that a fair proportion of the 25,000 respiratory cycles are voluntary and forcible acts. This age, so self-conscious in many things, is thus to be secured against lethargic, indifferent and unconscious respiration, which has been the cause of much of the pulmonary weakness of the past. The most casual observer will note that it is not our boys and girls who need reformation from respiratory delinquencies, but the fathers and mothers. It is only the children who have learned from their teachers how to use their respiratory organs who really know how to breathe. The large majority of those in adult life have never yet learned how to take a full inspiration or execute a forced expiration. They are totally ignorant of what is meant by a voluntary respiration. In consequence of this the average adult never employs the lungs beyond that which is essential to existence, and to those engaged in sedentary pursuits this need is exceedingly small. On the other hand, every child, disciplined to-day in the accepted respiratory school, is capable of taking in twice as many cubic inches of air as his parent, and habitually uses his breathing organs with proportionately greater freedom and scope. In comparison with the school children of to-day the parents are a race of pulmonary pigmies.

This constant oversight of the lungs brings with it respiratory fulness with perfect oxygenation that in turn develops material out of which energy proceeds. The augmented lungs and extended respiratory action begets an increased desire for air, and these promote a condition of mind that is emulous of bright surroundings. There is nothing that secures appreciation of hygienic conditions like a personal experience of their benefits. To one thus endowed there is a delicious sense of pleasure in the pressure of the lungs against their confines, and it is not easy to deprive him of his powers to battle with bad air.

These methods of cultivation secure an esthetic and cultured respiratory demeanor and at the same time create a longing for complete and repeated changes of air, much as the cultivated taste of the epicure delights in changes of viands. How young, wholesome lungs do yearn for some new brand of alveola-titillating atmosphere! Moreover the highly educated breathing apparatus has analytical capabilities so that it may appreciate that a molecule of oxygen is an impact of two atoms of the element while it recognizes a molecule of ozone as a combination of three. Furthermore, the lungs feel the corroding energy of the triplet to be many times greater than that of the twin, and the influence it exerts upon the breathing apparatus exemplifies a higher intelligence than mere automatism. An educated pair of lungs observes that the air is not imponderable and notes the thermometric and the barometric rise and fall. The mind and the lungs together grow familiar with the physical character of the air, its invisible inhabitants, the microbes and their potencies for good or ill, as well as the general and specific qualities of the air dust.

If it is true, as is calculated, that in the air of the city a man breathes 37,000,000 spores every ten hours it is not from aerial purity that any of the city denizens continue to live and move and have their being. It is also well known that in the atmosphere everywhere there is an opulence of oxygen and the greatest need is a capacious and intelligently controlled breathing apparatus to utilize it, and at the same time to successfully conduct the hygienic chemistry of the perfect function. The educated and sensitive lungs will isolate the deleterious ingredients more rapidly than the microscopist or the chemist; and those objects entrapped upon the microscopic slide, which appear so interesting and beautiful to the visual sense are altogether unlovable to the breathing apparatus when they gain access within their sacred precincts. This ever-increasing discriminating capacity of the human lungs enables men to remain for a season amid deleterious influences with comparative safety.

It was assumed many years ago that the coëfficient of oxygen needful and belonging to animals was fixed by the animal's intelligence. Thus, a dog required more oxygen than did a hare of equal weight; the chimpanzee, the nearest animal to man in point of anatomic resemblance, needed less than man. Whether these estimates were considered fanciful or not, it is certain that to breathe well to-day is the most modern method of demonstrating advancing intelligence.

Falling in line with this display of wisdom in the exercise and development of the lungs are the efforts that are everywhere made to reduce the aerial threatenings and improve the quality of the air we breathe. But for these efforts the vitiated city atmosphere would be most deplorable in its consequences to those compelled to remain within the urban limits. However, it is only amid such surroundings that we can discover how apparently insensible some persons are to the subtle influence of vicious atmosphere, and

observe the variety of means which contribute to counteract the bad air and unhygienic conditions.

The elaborate and perfect system of interchange that has been going on since the world began between the earth, the vegetable and the animal kingdom, with no waste of material, still continues to command the admiration and thanks of every grateful creature. This is also supplemented by a process of sanitary chemistry—more flexible and variable—by which the actions and reactions of materials and the affinities and aversions of the silent and unseen forces are made to conform in the main to the best interests of human kind through the provisions of the *vis medicatrix naturæ*.

To reinforce these natural efforts at sanitation, every city to-day has in its employ a capable corps of workers whose business it is to look after the various impurities. It is the custom in several municipalities to gather a measure of the atmosphere from different portions of the city and force it through materials in which are entrapped the impurities, and these are carefully isolated and estimated, and the result announced. To afford all who desire to acquaint themselves with the relative impurities existing in different localities a record is made at intervals not exceeding one week.

The use of the microscope and other instruments of investigation has become popular amusement, and there is an individual as well as public surveillance of the atmosphere. Through thousands of channels of observation the intelligent layman is accumulating experience that enables him to trace facts and inferences to their logical conclusions, and the good results are constantly multiplying. Knowing that evils exist he seeks to prevent their influences in himself and others, and though his supremest need demands his presence for a season amid the unwholesomeness, he provides himself with a home beyond its contaminations, where he can retire after his daily duties are over, and render his lungs clean again ere he starts them upon their fresh career of defilement. His household is continuously kept amid the respiratory advantages.

Toward the attainment of these possibilities every recent invention seems to felicitously trend. The proper thing is ever more and more becoming the popular thing. In modern street paving there are some remarkable advantages secured to the respiratory apparatus. The myriad crevices favoring the accumulation of dust and offal in the cobble-stone pavements are replaced by the smoother surfaces of the granite and asphalt. These pavements in the streets of the present city make the dust obvious to the street cleaner, and spontaneous removal by rainfalls is facilitated. The frequent use of the sprinkling cart has a salutary effect in lessening the contamination of the respirable air. We have recently bade adieu to the lumbering horse cars and the thousands of horses which contributed to the filth of every city. The dust, the offal, exhalations, effluvia, gas and odors innumerable incident upon the vast herd of horses upon the streets are no longer with us. By the electric and cable cars thousands of horses in addition to those formerly employed by the horse-car companies are rendered unnecessary. The commodious and wholesome rapid-transit cars are a desirable means of conveyance and the great celerity of travel yields additional advantages by expediting business, social and pleasure trips. By the reduction of evil long prevalent, and the substitution of the most royal good, they contribute to modern respiratory advantages beyond computation.

The more recent methods of city illumination has done much that is favorable to wholesome activity in the breathing apparatus. The old-time fishtail gas jet, capable of consuming as much oxygen as several persons, is substituted by the electric light. This is especially noticeable in assembly rooms. By the use of electric light there is no oxygen waste and no products of imperfect combustion. Its universal employment would cause an oxygen saving to every city sufficient to supply twice the number of its inhabitants with good wholesome air.

In the matter of heating, the respiratory organs are considered. The air is not permitted to become gloomy with smoke and other evidences of imperfect combustion, and the smoke-consumer is voluntarily or legally adopted. In the homes we can have our apartments warmed by the moist or dry methods and can so arrange that there will be an equable continuous dry atmosphere, free from dust. Again, we may imitate the barometric rise and fall to suit our fancy or gratify our wish. In the districts where natural gas abounds the air can be kept free from smoke by its employment as a fuel and without even the annoyance of dust from ashes. Some of the more recent methods of supplying air and heat to modern buildings embrace advantages that are destined to lift us out of the empire of death from aerial impurity. The air is drawn by fans through closely woven silk screens or forced through baths which wash and render it aseptic. The shafts into which the atmosphere is drawn are extended to a high altitude to avoid the dust and contamination. After gaining admittance to the basement it receives the desired barometric and thermometric qualities before it is delivered throughout the building. In each room is placed an indicator with a movable needle by the least motion of which the temperature of the apartment can be changed. This adjustment resembles that portion of our timepieces which enables us to regulate its speed. Hundreds of other aids and means of protection to the developing breathing apparatus can be observed in modern city building.

How eminently fitting that an age which protects and fosters its respiratory good should form a remarkably close alliance between its pastime and its business. Wherever we go on a Saturday afternoon we find the city denizens hastening, by every avenue, from the crowd and tumult into the more rural surroundings. The old dead roadways, that a few years ago were overgrown with weeds and grasses, teem with cyclers, and the little town along the way lifts up its head again as if possessed of a new life. The glorious half-holiday rescues many a failing respiration from the thraldom of disease. To take a stroll or join in some of these methods of oxygen hunting, or spend the Sabbath amid nature's wholesomeness, is to serve God. A half century ago this would have seemed sacrilege and the Saturday half holidays would have been regarded by our grandsires as sinful and profligate. But this is the end of the nineteenth century and the world is growing young again through its modern respiratory advantages.

Cricket, football, baseball, tennis, golf, fishing and athletics generally are familiar to every place and are regarded as suitable pastimes for all young Americans. How they have aided in the resuscitation of some of

the yielding respiratory organs! It is not the schoolboy, neither the idle men of means who are interesting themselves in these sports and pastimes, but the masses. The countless excursions by rail or water are daily inviting a willing humanity to bathe their bodies in the sunlight and purify their lungs in the aerial change. Whatever morsel of air or quality of atmosphere one desires may be secured by application to the numerous competing land or waterways, and he will comfortably, cheaply and with great celerity be transported to the Eldorado of his desire. With these new experiences and ever-changing quality of the respired air the lungs not only develop their vital capacity but acquire a versatility in their methods of accommodating themselves to the aerial circumstances. There is undoubtedly a remarkable adaptability by which the lungs may adjust themselves to the conditions. And this serves their possessor in good stead when it is impossible to select the environments, because the respiratory versatility enables him to breathe the disease-ladened air with comparative impunity. Man is to-day capable, for the most part, of educating and subjugating nature, and when the surroundings are at fault he makes or modifies them; failing in this, he can rely upon the discriminating care acquired by his lungs to render the atmospheric foes inert.

Through all the avenues of hygienic information the truth is being ever more and more impressed that pure air and exercise are equal forces acting in the same direction. The contaminations from disease germs and terrestial impurities are to be met by an equable antagonism vouchsafed through the intelligent employment of the functions of respiration. Meanwhile most of us agree with Lord Beaconsfield that "the atmosphere has more to do with human happiness than all the accidents of fortune and all the acts of government."

The adjustment of the respiratory possibilities to the needs of each individual is largely a matter of his own choosing. There are some who have tarried too long under the lethal influences of indifferent respiration, and have in consequence bartered their birthright. Some again there are whose lungs, like the Scotch farms of which we read, are "poor by nature and ruined by cultivation." There may be no regal duty for such to perform but even these can hold from future human struggle the burden of preventable suffering by negatively remaining away from the current of human life that is to-day flowing so directly toward the goal of physical completeness.

DISCUSSION.

DR. KELLOGG—In a certain school there was considerable difficulty in persuading the Indians to attend. I thought they would be glad to avail themselves of the opportunity. They were still in a primitive state and were running about in the forest absolutely nude. There was a lot of Indians who thought it unhealthy to be in the house, and took their children away on that account. It was instructive to me to see that they were so solicitous about their children's health.

He said we did not know how to breathe unless we learned it at school. It is not even known in school. I found the best teacher for breathing was a baby. The good Lord told them how to breathe and they breathe just right. I have told many ladies that the best of their breathing powers were tied up; and that if they wanted to learn how to breathe to take a baby and lay it on a bed, and notice how it breathes. I say breathe with the whole trunk. When he breathes the whole trunk will be inflated.

Women breathe with the upper and men with the lower part of the body. What all need is full respiration of the entire chest. I have two little boys and I frequently make them run up and down stairs once or twice to make them breathe properly.

I formerly practiced voluntary respiration, but I am convinced it is not a success. Simply breathing or exercising for the sake of it is tiresome. I have not been able to breathe voluntarily more than two or three minutes at a time. The muscles very soon get tired. But if you will compel yourself to breathe by bicycle riding, jumping up and down, room exercising, or anything else that will create a demand for pure air you will find that it is not so tiresome. The lungs will act in the most vigorous and voluntary manner. For the last seven years I have used gymnasiums for my patients with excellent results.

Dr. ——, in some experiments made in the Dangerfield Academy, showed that after six months exercise in the gymnasium he found that the involuntary activity of the lungs was doubled. It became twice as great while the students slept, showing that the effects of gymnasium work are continuous during sleeping as well as waking hours.

There is another point: The position assumed in sitting. A lady said, "I want to talk to you about my lungs. My mother thinks I am to have consumption because I have no chest." I made her stand up and she stood with shoulders and chest contracted. A ruler laid on the chest would have touched the shoulders on either side. I made her bend and look upward, and found she had a well developed chest, but was carrying it all behind instead of in front. The lungs had not been properly expanded. In making her stand straight I entirely corrected the deformity. It is becoming a very common deformity. I think it is largely caused by sitting on the back instead of on the thighs, and it results in people becoming round-shouldered. The body is held in this mold for so long a time that it finally acquires a certain degree of permanency.

The doctors ought to be continuously calling attention to standing straight and raising the chest. While standing straight the lungs are expanded, and the abdominal viscera trained up. Walking, boxing, bicycling are agreeable and exhilarating, and accomplish these beneficial results. They render proper breathing more natural.

DR. GARBER—I have had considerable practice with men who were engaged in blowing window glass, and it has been my experience, that forced exercise will cause great development of the chest. In 500 glass blowers I can not remember a single case of lung trouble. I used a respirometer on some of these men, and found they can inhale 300 cubic inches of air, and I frequently found a difference of five and sometimes six inches between inspiration and expiration. Some people whom I regarded as consumptives have since become well, and lungs predisposed to disease of that kind became strong. I am very much in favor of gymnasium exercise of some kind for all.

DR. KELLOGG—The atmosphere is as important to us as the water that we drink, or the light that shines upon us. I want to ask a question in regard to the consumption of this oxygen; I want to ask the author if he thinks that it would materially affect the health of the city to change to electric lights on account of more consumption of oxygen by gas jets than by the electric lights.

DR. ENGLISH—I made, some time ago, an investigation as to the consumption of oxygen by the ordinary gaslight jet, and it showed that one gas jet consumed as much oxygen as would supply three ordinary persons. Assuming, then, that we have 100 lights in the assembly room, and 300 persons. We would have consumed by the lights as much oxygen as would have been consumed by the individuals in that room.

When we build a room the area is usually estimated to accommodate a certain number of people, and a building of

wholesale emporiums is usually conducted upon the principle that so many cubic inches of air must be supplied to every individual. When we use the electric light, especially the incandescent, we consume no oxygen. The incandescence of the carbon must be considered the source of light. It burns in a vacuum, with no possible oxygen waste. In every city we have a certain proportion of people living in one room. Estimate the number of rooms in the city, and in that way we can estimate approximately the amount of oxygen we are consuming by the use of these burners. Then there is another point; just estimate the amount of contaminations, the smoke, gas, odors, and the various emanations which are contributed to the oxygen by these fish-tail gas jets, and the heat that the gas produces, whereas, with electric incandescent lights burning in a vacuum, we have a brilliant light that is satisfactory, comfortable to the eyes, do not have these contaminations, and we have a minimum amount of heat. The consequence is that we do not vitiate the atmosphere. With arc burners on the streets and in the rooms we would have a much larger result, for one arc burner was estimated to be equivalent to sixteen times the power of the ordinary burner, I believe. The comparison is between the two different kinds of light. The arc burner is exposed to the atmosphere, and consumes a large quantity of oxygen; but there is no comparison that would demonstrate the advantage that would be accorded the electric light. When we go back to oil lamps and candles and such devices for lighting purposes, they are often worse, because their contributions to the atmosphere are vastly in excess.

It is a fact that we do not in the schools to-day teach the children how to breathe. We should impress upon them that there are vital organs in the human body and that it is within the capacity of our volition to control these organs, these lungs. We may breathe fast or slow as we choose, and take in as much or as little air. We may suspend respiration, but we can not suspend the action of the mind enough to prevent the use of our lungs. I think Nature has demonstrated by placing these organs within our body it is our duty to use them, or they are indeed not vital organs. By that means Nature secures for us perfect respiration, good sound lungs and a wholesome body.

DR. KELLOGG—I just want to mention three disadvantages: gas stoves, kerosene stoves and gas grates as heaters. A doctor put a kerosene stove in a room and the next day the patient was dead. He told me he was satisfied the patient was suffocated by the odors arising from the stove. The gas stove produces ten times as much impurity as an ordinary gas burner, and a gas grate gives out at least twenty times as much impurity as a gas burner. It seems to me a very dangerous thing.

DR. ENGLISH—I would like to ask the gentleman what gas he has reference to—artificial, natural, illuminating or what?

DR. KELLOGG—It is coal gas. That is a hurtful gas. In natural gas heaters as well as in grates, the opening for the escape of the gases is in some scarcely ⅛ of an inch in width, so when the door was opened it was certain to drive all the foul gases out into the room, so that I think it applies to both natural and artificial gas.

THE CHAIRMAN—I think the general fashion of ladies' dresses is wrong, and that the weight instead of hanging from the hips, as is now the case, should hang from the shoulders. I think until that is done they will never have perfect respiration, and that if Dr. English will start a crusade on this line it will result in much better health in every respect, and especially there will be less falling of membranes which the women complain of so much and which gives the gynecologists so much work. They should also have their dresses made so that two or three inches additional would be allowed for expansion of the chest.

DR. ENGLISH—I think that the efforts of such reformers as Jenness-Miller have influenced the women, and in my experience—and I have had rather large experience in respiratory difficulties because my special realm is the treatment of diseases of the chest—I find that women are disposed to lay aside their pains and corsets and take up more life and health. I really think if I incorporated that subject in my paper I should have illustrated the women of the future. They are growing sensible as well as the men.

DR. DRAYTON—This Jenness-Miller reform is simply a departure from the strict lines of fashion. It is simply an attempt to adapt certain principles of hygiene to fashionable dress. You may get some benefit from it, but it appears to me that the attempt will not be more beneficial than the attempts already made on that line. The new woman will make some difference in this matter of fashionable costume. The new woman likes the bicycle and the woman who rides finds it necessary to adopt a bicycle costume. She finds it is not only good to make muscle in the arms but also in the abdominal region, and after a little practice she would prefer to put her finger in the face of fashion than to give up the wheel. So I think we shall have a great improvement from this cause. I have advised the use of the wheel to a great many ladies. I have studied it and its advantages and I am satisfied its general use will be of great benefit.

DR. J. A. WORK, Indiana—The wheel is not available to all. We should give our women more employment that will have the effect of developing what is claimed for the wheel, which is for amusement, but as a vocation I believe general housework, such as our mothers and grandmothers used to do, would be better for them. I have found that the German servant girls who have not followed fashion have very good breathing apparatus and very good lungs. They stand erect and they have employment that compels them to do it. They have to breathe right and they have to clothe themselves right or not do the work required of them. Two young Swedish ladies came to my office for treatment. One wanted to know what was the matter with her side. I put my hand on the side of the chest and told her to take a long breath and her chest shoved up under her chin. She could not expand it around the base of the lungs one-half inch. Under the armpits above the breast she expanded three inches. I said: "That is the trouble with your side; take off your corset and you will breathe well." Let us give them employment that will make them breathe.

DR. H. E. GARRISON, Illinois—I believe I am the only woman doctor present. I have practiced for twenty years and I can ride and walk as readily with as without a corset. Mrs. J. S. Lane has a book upon the subject and if the gentlemen will read it they will know why we have worn corsets and will continue to wear them as long as we live.

SURGERY OF THE KIDNEY.

BEING A STUDY OF A SERIES OF CASES IN WHICH METHODS OF DIAGNOSIS AND TREATMENT ARE ILLUSTRATED.

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TUBERCULOSIS OF THE KIDNEY.

In this series of cases two appear to have been tubercular, although in neither case was an absolute diagnosis made before operation, and in the second case doubt still remains as to the real cause of the disease. In both cases, however, all the means of diagnosis known, except inoculation experiments, were made, and every step was guided by positive indications for treatment. In the first case, Mrs. S., nephrectomy was contraindicated by the desperate condition of the other kidney, determined by catheterizing the ureters. In the second case, Miss C., unusual

difficulties presented themselves and they were overcome, one by one. The treatment of this patient was most conservative and careful. The full report of these cases it is believed will be useful and suggestive.

Case 1.—Synopsis: Sudden obstruction of right ureter three years ago; pyonephrosis; aspiration, drainage; occasional discharge of calculi through the wound; continued fever and chills with cystitis; catheterization of both ureters showing advanced disease of left kidney; removal of calculus and evidement; death in five months from uremia.

Mrs. S., aged 34, mother of three children, consulted me in August, 1894, and gave the following history: Three years ago, and some years after the birth of her last child, she was taken with chills, fever and pain in the right side. The chills continued for three weeks, when a large tumor appeared in the right side. This tumor fluctuated and was aspirated repeatedly by the attending physician, and a large quantity of pus withdrawn. The puncture was at last enlarged and a tube inserted in the loin for permanent drainage. The temperature became normal and the patient gradually gained in health and strength, but she was continually troubled by the closing of the sinus and the recurrence of the chills. There was considerable irritation of the bladder and almost constant night sweats. Many small pieces of stone were discharged from the sinus, indicating the presence of other calculi. The patient was a thin, slight woman, of a nervous temperament and a quick, intelligent look, a bright, quick eye and expressive, nervous features. She had a well-formed thorax with no show of tubercular disease in either lung, no enlarged lymph glands in the neck or axillæ and no indication of general tuberculosis. The heart had a free, normal and regular pulsation which was rapid, 96, and violent. The apex was farther removed from the median line than is normal. The arteries were soft and flexible. The abdomen presented no abnormality except a tumor three inches in diameter in the right side, which was connected with a sinus opening through the skin halfway between the crest of the ilium and the border of the ribs. This tumor was painful on pressure and was evidently the enlarged displaced kidney. Examination of the urine showed a normal quantity containing from six to eight points of albumin measured by the Eshbach albuminometer, some casts and a large quantity of pus and mucus. Examination of the sediment for tubercle bacilli was made by me without result, though many other bacilli were found. In a vaginal and rectal examination the right ureter was found to be about 1 cm. in diameter, hard and painful to pressure. The left ureter was smaller and softer, but very easily recognized and somewhat sensitive. Still I hoped that the left kidney might be found sound and well. Although the patient's condition was not good, I determined to make an effort to remove the calculus from the right kidney and perhaps close the sinus, and at the same time make a positive diagnosis of the condition of the left kidney. With the assistance of Dr. George Nesbitt and Dr. Harry Wilder the patient was prepared and anesthetized with chloroform, the urethra was dilated and the ureteral sounds passed by touch into the two ureters. From the right ureter a thick pus a few drops at a time passed on pressure above the brim of the pelvis. From the left ureter an average quantity of turbid urine passed in intermittent jets of four or five drops, but the quantity was not measured. This urine contained considerable albumin and was very turbid. It was immediately examined under the microscope. The quantity of pus and its character seemed to indicate an advanced condition of disease in the left kidney and contraindicated any extensive operation upon the remnant of the right kidney. The patient was again brought fully under the anesthetic and the sinus enlarged sufficiently to remove the calculus in the pelvis of the degenerated right kidney. This calculus was 1½ inches long and nearly 1 inch in diameter. The pelvis and ureter of the right kidney were carefully examined with the finger and no other stones were found. Nephrectomy seemed to be contraindiindicated by the condition of the remaining kidney; the granulation tissue, which was evidently tubercular, was therefore scraped away and the wound packed with iodoform gauze. The patient was put to bed in good condition and rallied promptly. The wound was dressed upon the fifth day and daily afterward by Dr. Nesbitt. The temperature, which had been about 100 degrees at night before the operation, gradually fell to normal, but the quantity of albumin in the urine increased for two weeks and then, with a milk and kumyss diet, it gradually fell to a mere trace. The wound healed slowly. The urine, however, began to be scanty three months after the operation, and the patient died in uremic convulsions two months later and five months after the operation. No postmortem was made.

In this case nephrectomy and ureterectomy would certainly have been made, in spite of the thickening of the left ureter, had not catheterization of the ureter demonstrated the advanced disease of the left kidney. Had this operation been done the danger to the patient's life would have been much greater, and the benefit to be expected no more than by the simpler procedure.

Case 2.—Typhoid at 12 years followed by cystitis, bloody urine, pain in side, strangury; slow improvement; after ten years, drainage of the bladder for nine months with slight improvement; catheterization of the ureters demonstrates a healthy and competent right kidney and degenerated and suppurating left kidney; nephrectomy; partial ureterotomy; implantation of vesical end of ureter into the vagina; recovery.

Miss C., aged 40, consulted me in December, 1895, for a pain which she constantly felt in her left side in the region of the left ovary, and for frequent painful urination and occasional attacks of chills and fever. She gave a family history of the best kind. Her ancestors were of healthy German stock and she was herself well until her eleventh or twelfth year, when she had a very severe attack of typhoid fever from which she made an imperfect recovery. Following typhoid fever there was painful and frequent micturition, which at last became so desperate that her clothes became offensive from ammoniacal urine, and it was impossible on this account for her to get any position to work. During this time there was great pain in the side which was relieved by lying down. Occasionally there would be a discharge of bloody urine and at all times, as appears from the history, a considerable quantity of pus at irregular intervals. The symptoms, however, somewhat subsided after two or three years, and the patient was able to go about in spite of frequent attacks of pain aud painful urination. Many physicians were consulted without avail, and at last fourteen years ago the bladder was examined by Dr. E. C. Dudley, who made some operation upon it resulting in drainage of the bladder. This drainage was continued for nine months when

the opening was closed up and the patient had some relief. She frequently rose to urinate nevertheless as many as nineteen times in the night as she discovered by an ingenious method. Every time she rose she took a match from her match box, laid it on the table and counted the matches in the morning. About once in two or three months during the past ten years she had attacks of "pain in the side" of a very severe character. During these attacks there was a high temperature and rapid pulse. She used the thermometer and frequently found the temperature 105 degrees F. Vomiting often accompanied these attacks, and they usually passed off after two or three days with a discharge of urine containing half or two-thirds its bulk of pus. She could give accurate information upon this point from the fact that she collected the urine in a wide-mouthed bottle, and allowed it to stand long enough to see the amount of sediment. During the past five or six months the attacks have been more painful and more frequent than heretofore. They had appeared as often as once in three weeks.

When I first saw her she had just recovered from an attack of this kind. The specimen of urine which she gave me at the time had only a small sediment of pus, and contained only a small amount of albumin, there were no casts or other evidence of nephritis. The patient was large and covered with a thick layer of fat making examination difficult. The lungs were perfectly healthy, and the heart free from murmurs but enlarged considerably, so that the apex beat lay 3½ inches from the median line. The spleen and liver could not be palpated, and the area of hepatic dullness seemed to be less rather than more than normal. There was no tumor to be felt in the abdomen, but there was a region of very marked tenderness commencing at the edge of the left short ribs and extending downward into the left pelvis. The points of greatest tenderness seem to be at the upper and lower extremity of this line. The region of the bladder was also distinctly tender upon pressure. The vagina was found to be normal and very small, and the infantile uterus was found lying in its normal position and perfectly movable. In the pelvis there could be easily palpated a distinct tumor upon the left side which seemed to be quite hard, apparently cystic and excessively tender to pressure. The meatus urinarius was red and on pressure a small amount of pus could be forced out of the numerous folds of the mucous membrane. The patient's temperature at this time was normal and her pulse 72. There were 1200 c.c. of urine passed in 24 hours and this urine was alkalin and had a specific gravity of 1.011 and contained 28 gramms of urea; there was a considerable quantity of pus present but no casts. On February 15, the patient was put in the knee chest position, the urethra dilated, the bladder cocainized and inflated and the silver ureteral catheter successfully passed into the right ureter. She passed 6.5 c.c. of urine through this catheter in fifteen minutes. This urine contained absolutely no pus, no epithelium, no albumin and it registered 40 milligrams of urea to the c.c. It was of acid reaction but the quantity was not sufficient to allow me to take the specific gravity. It was not perfectly clear, but was slightly turbid with a sediment of amorphous urates and phosphates. At this time it was impossible to find the left ureter and the patient was so much exhausted that no farther examination was made. The bladder appeared perfectly normal except for a rather pale and anemic patch where the left ureter would naturally be looked for. A day or two afterward a second attempt was made to find the left ureter but without avail. The right ureter was catheterized again with practically the same result. For nearly two weeks attempts were made on each succeeding day to find the left ureter, but no trace of it could be made out, although at each sitting the orifice of the right ureter was plainly visible. Search was made for an abnormally placed ureteral orifice in the urethra also. Various positions were tried and various methods of catheterization were equally unsuccessful.

Although a diagnosis of suppurative disease of the left ureter and kidney had been made it seemed necessary to make this diagnosis positive before so grave an operation as nephrotomy or nephrectomy should be undertaken. There was indubitable evidence of a painful tumor in the left side of the pelvis about where the ureter ought to be found, and this was also the location of occasional spasmodic pains accompanied by a desire to urinate. The possibility of a calculus in this portion of the ureter was kept in mind and on March 11 the patient was prepared for an anesthetic. On March 12 after a comfortable night, during which about three pints of distilled water had been taken by the mouth, and after the colon had been flushed with very hot water, the patient was anesthetized with chloroform and with the assistance of Dr. Fletcher, Dr. D. H. Galloway and Dr. Mary Bates the bladder opened along the line of the old sutures by an incision long enough to allow the finger to be passed into the bladder. The location of the right ureter could not be felt. The orifice of the left ureter was recognized by a hard mass in contact with the wall of the bladder and by the resistance of a line of scar tissue which extended about an inch upward from the normal location of the orifice of the left ureter to this hard mass. By means of a small probe passed into the bladder under the point of the finger the end of the scar was recognized as the contracted orifice of the ureter into which the probe passed with difficulty. The sound was withdrawn and a silver ureteral catheter passed in its place. Three ounces of a clear, watery fluid with a few shreds of pus then passed out the catheter with considerable force. Two ounces of this fluid were first secured for examination and then the region of the kidney and ureter was kneaded and one ounce of almost pure pus was forced out by manipulation. A long flexible ureteral catheter 2 mm. in diameter and fifty centimeters long was then passed in the place of the silver catheter and pressed forward until it was believed to be in the pelvis of the kidney and until it met a distinct resistance. Through this catheter three ounces of warm sterilized water was easily carried by gravity into the pelvis of the kidney and then allowed to run out. This was repeated several times. The catheter met with no obstruction in its course through the ureter. It was decided to leave this catheter in the ureter and wash out the kidney for a day or two, hoping in this way to save the kidney. This catheter and the irrigation produced no pain.

The patient was put to bed in good condition. The two ounces of fluid removed from the distended ureter at this operation contained a considerable amount of pus, a trace of albumin and some carbonates and less than one-seventh the amount of urea which normal urine contains. This pus was laboriously examined for tubercle bacilli by methods that

proved adequate with sputa, but none could be found. This examination seemed to me to indicate a nearly complete destruction of the left kidney. For the first time I had in my possession the information necessary to warrant the complete removal of this kidney and its ureter. During the succeeding week the patient's temperature never rose above 99.3 F. and her pulse varied between 82 and 96 as shown in the accompanying chart. (Fig. 1). She slept well. The kidney was washed three or four times a day with sterilized water or with a solution of permanganate of potash. During all this time a thick green pus poured out of the catheter at the rate of about one and one-half ounces per day but no urine escaped. After trying this irrigation for a week without any diminution in the amount of pus the catheter was carefully removed. The urine and the antiseptics which had been used had produced a hardening of the catheter so that it was no longer flexible but continued to keep the shape it had been in during the week. This made a very interesting cast of the ureter and showed that the kidney was displaced forward and that the ureter made quite a sharp turn about one and one-half inches from the end of the catheter

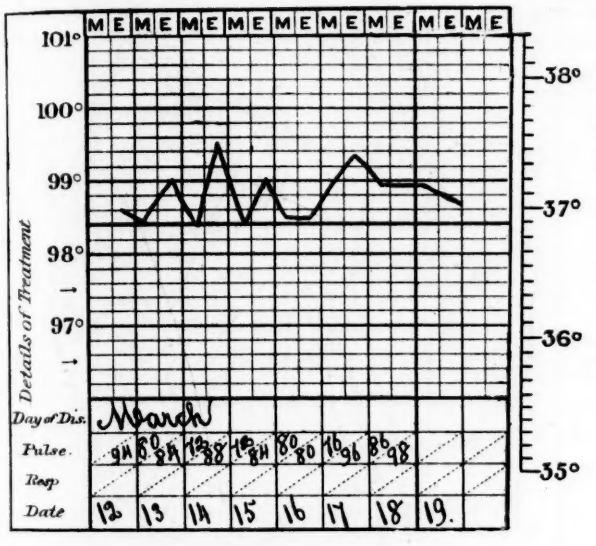

FIG. 1. Miss C.

and that it maintained during the rest of its course to the bladder a rather broader excursion from the spine than is normal. A drawing of this catheter on a reduced scale with the supposed position of the kidney and bladder is given below. (Fig. 2). While in bed with the catheter in place an attempt was made to take a skyagraphic picture of the region of the kidney, hoping to demonstrate the presence or absence of a calculus, but this experiment was without result. The patient went home for a rest and was put on a full diet with one quart of milk and a quart or more of lithiated water each day.

On the first day of April the patient returned to my care in St. Luke's Hospital for the removal of the kidney. Examination at this time showed that 82 ounces, 2,624 cubic centimeters, of pale alkalin urine with a specific gravity of 1.004 and no albumin, no sugar and only a trace of pus and bladder epithelium, were passed in twenty-four hours. This urine contained 22.5 grams in twenty-four hours. The total solids for twenty-four hours was 44 grams.

Her temperature on the night before the operation was 98.8 degrees F. and her pulse 82 to 94 and her respiration 24 per minute. Several small doses of calomel were given during the afternoon followed by castor oil and in the morning an enema. The patient was anesthetized with chloroform and an oblique incision was made below the margin of the last rib in the lumbar region and curved forward over the crest of the ilium and then downward. The muscles and fascia were divided down to the kidneys. The kidney was carefully separated from its surroundings by breaking up the adhesion and drawn up into the wound. During this manipulation the wall of the kidney was ruptured and a considerable amount of clear fluid apparently containing pus escaped into the wound. A clamp was placed upon the very small renal vessels and the kidney with the ureter attached was separated and drawn forward. The ureter was dissected out as low down into the pelvis as possible, where it was found about the size of the patient's middle finger, thin walled and at least 15 mm. in diameter. The ureter was grasped with forceps, cut off and its edges caught with catgut sutures and turned in and the raw edges brought together with sutures and tied. The end of the ureter was then dropt into the pelvis. The patient stood the operation very well but took the chloroform with some difficulty.

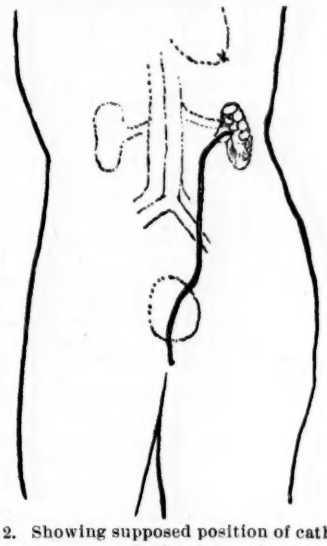

FIG. 2. Showing supposed position of catheter.

The temperature record during the succeeding four weeks is given in the accompanying chart. (Fig. 3). The wound healed up rapidly but there was a tender and painful spot in the pelvis which was supposed to be the end of the suppurating ureter and another operation was undertaken for the purpose of implanting it in the vagina if it was found impossible to remove it. This operation was done April 27. After the ordinary preparation the day before, the patient was anesthetized and an incision was made in the left cul-de-sac of the vagina and the finger pressed in. A catheter was again with great difficulty passed into the greatly contracted orifice of the left ureter and distinctly felt by the finger in the vault of the vagina. With the finger-nail and a dissecting forceps the ureter was loosened up as high as possible, but it was found to be impossible to remove the upper end of the ureter from its attachments. An artery forceps was passed into the opening in the vault of the vagina by the side of the finger until near the bladder it was felt to grasp the ureter with the ureteral sound in it. The sound was then removed, the artery forceps clamped and the ureter cut off on the bladder side of the

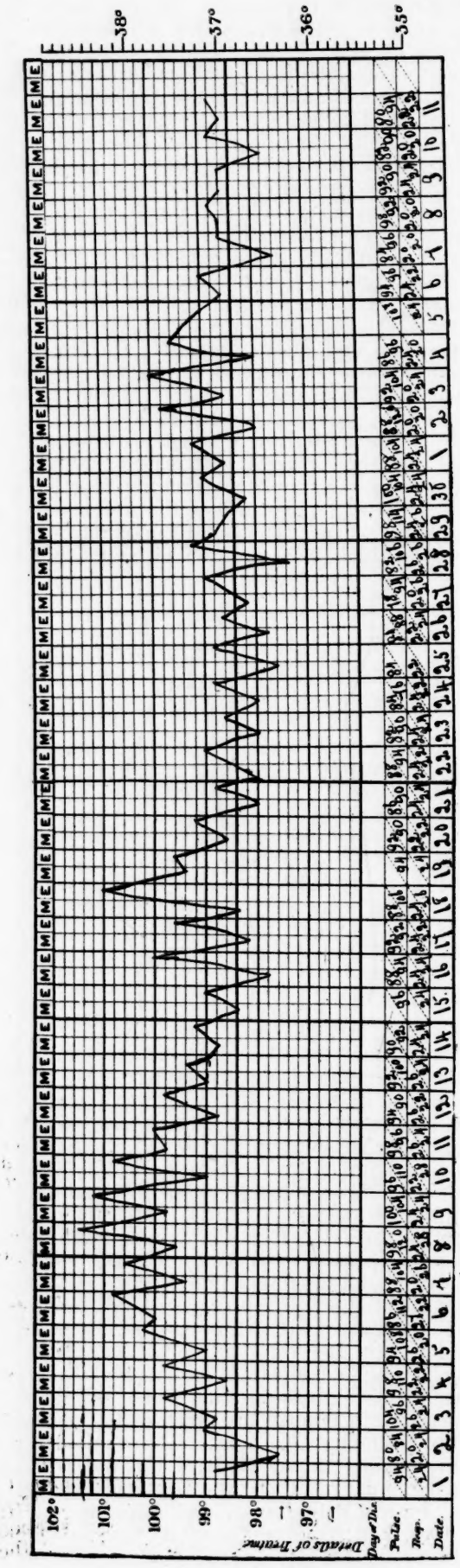

FIGURE 3.

forceps. By means of several sutures the end of the ureter was pulled down and fastened into the vagina. The contracted orifice of the left ureter in the bladder seemed to promise closure without any manipulation and it was let alone. The incision in the bladder through which the left ureter had been catheterized was then partially closed up and a catheter was left in the urethra for drainage.

The patient again suffered a great deal from the anesthetic, but otherwise did well. The temperature chart shows her condition after this operation as long as she remained in the hospital. The ureter remained firmly attached in the vagina and no urine passed from the bladder into the wound and there is every reason to believe that the left ureteral orifice in the bladder is closed up. The suture of the bladder, however, was not successful and it all opened in three or four days. After so many examinations and so much operative procedure the patient lost spirit and strength and she was sent home to recuperate. The urine has

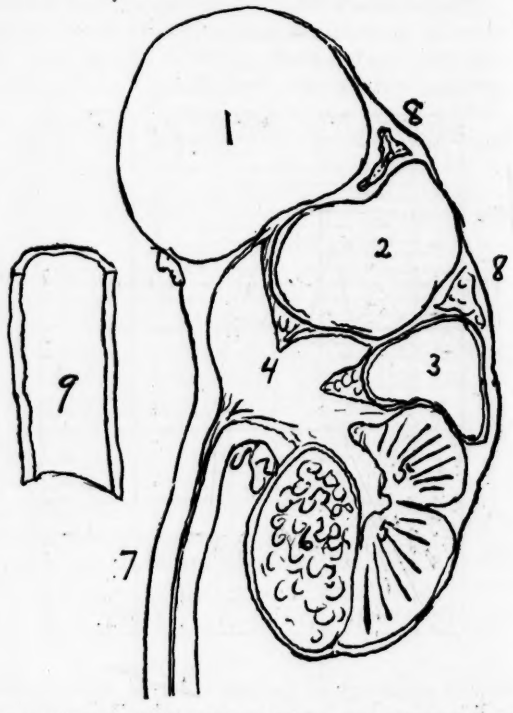

FIG. 4. Diagram of Kidney and Ureter. 1, 2, 3, Cysts not connected with ureter; 4, slightly dilated pelvis; 5, partially functionating remnant of kidney; 6, encysted fatty degenerated material; 7, greatly thickened ureter; 8, masses of fat and connective tissue; 9, the relative size and thickness of dilated ureter.

been examined several times since the operation and it is entirely free from abnormal constituents.

The accompanying sketch (Fig. 4), gives a fair idea of the cystic condition of the kidney. The upper two-thirds of the kidney were entirely destroyed and the place of the normal elements of the kidney was filled with eight or ten cysts, some of them, at least, did not open into the pelvis of the kidney at all. One cyst contained a white cheesy substance which was insoluble in either cold or boiling hydrochloric acid or in dilute hydrochloric acid cold or boiling, or in cold or boiling nitro-hydrochloric acid, but turned yellow in the latter, or in cold or boiling water; or in cold or boiling alcohol; or in cold or boiling carbon disulphid. It was disintegrated and partly soluble in 5 per cent. solution of caustic potash. Its color was not changed by iodin. Under the microscope it was granular, but on pressure of the

cover glass it became homogenous like lard. Tubercle bacilli could not be found in the cyst contents. In the lower part of the kidney there was a mass of fatty degenerated substance and close to it, marked 5,5, two bits of functionating kidney substance. No valve formation could be demonstrated in the case of the single cyst which opened into the pelvis of the kidney and the other cysts were certainly entirely separated from the pelvis and from each other. The ureter as it left the pelvis of the kidney had a diameter of 1 centimeter and a caliber of less than 1 millimeter. Three inches lower down the walls of the ureter were 1 millimeter only in thickness and the diameter of the ureter was 13 millimeters. A segment of this ureter near the pelvis of the kidney is shown in (Fig. 5). In the section of the ureter, the plications of the mucosa occupy a little more than half the thickness of the tube. The mucous membrane is

FIG. 5. Segment of the ureter an inch from the pelvis of the kidney drawn with the camera lucida and half-inch objective. This drawing shows two defects in the mucosa and adjacent inflammatory areas, reaching out beyond the muscular layer. Atheromatous arteries are also shown and lymph spaces filled with leucocytes.

intact for the most part and is covered by a regular layer of cylindrical epithelium overlaid by a fold of elastic connective tissue. This is surrounded by a double layer of muscular tissue in which are blood vessels and lymph channels. The pathology of this ureter seems to consist in increase in all the tissues beyond the cylindrical epithelium, in defects in the mucous membrane in places, and in masses of inflammatory tissue containing lymphoid cells which have infiltrated the muscular tissue outward from these defects in the mucosa. The active cells seem to penetrate between the bunches of muscle fibers and fill the intermuscular spaces. The blood vessels in places show advanced endarteritis and they are surrounded by inflammatory tissue, the cells of which take on a strong stain. Even outside of the outer layer of muscles are masses of leucocytes grouped about defects or openings in the bundles of muscular tissue.

"Of the 63,000,000 persons living to-day in the United States 9,000,000 or more will die of tuberculosis. This would mean about 150,000 deaths from this disease each year." (Victor C. Vaughan). It is probable that one out of every sixty of the inhabitants of this country or of the world is in the process of dying of this disease. The number of persons actually infected is much greater. Probably one-half or three-fourths of the inhabitants of cities are tubercular. It is not a wonder therefore that renal tuberculosis is a common disease. Dickinson [1] gives the result of the examination of 600 consecutive postmortems in two London hospitals, 300 were individuals over 12 years of age and 300 under 12 years of age; 180 of these individuals were tubercular, 126 under 12 and 54 over 12; 66 had renal tuberculosis, 49 under 12 and 17 over 12. In the young, males and females are attacked by renal tuberculosis with equal frequency. Among adults men are much more frequently attacked than women. Dickinson saw 44 cases in men and 23 women. Emil Palet [2] says that of 100 cases of renal tuberculosis studied by him only 16 proved to involve both kidneys, while in another series of 42 fatal cases operated upon, all were onesided except 12. Two thousand two hundred and thirty-one cases were treated in St. Thomas's Hospital [3] during the year ending Dec. 31, 1890, among which were the following:

Sarcoma of the kidney, 1; tubercular disease of the bladder, 2; hematuria, 4; pyuria, 2; renal calculus, 1; tubercular kidney, 1; pyonephrosis, 4; renal sinus (tubercular?) 1.

During the six months ending July 1, 1890, there were 3,860 patients treated in the Cook County Hospital, [4] among which were the following:

Perinephritic abscess, 1; movable kidney, nephrorrhaphy, 4; cirrhosis of kidney, 4; acute nephritis, 8; chronic nephritis, 34; pyelitis, 1.

During the six months ending December 31, 1890, 3,823 cases were treated, among which were the following:

Movable kidney, 3; perinephritic cellulitis, 3; rupture of the kidney, 4; cirrhosis of the kidney, 1; acute nephritis, 7; chronic nephritis, 56; pyonephrosis, 3; renal abscess, 1; renal colic, 1; tuberculosis of kidney, 1.

This disease begins as a metastatic focus in the kidney usually after an injury or at a time when the vital resistance is reduced by some intercurrent disease, or it arises from an extension upward of a tuberculosis from the epididymis or seminal vesicles through the prostate, bladder and ureter in the male, and from the urethra through bladder and ureter in the female. The greater number of cases are of renal orgin. There may be some doubt of the secondary metastatic nature in some cases, but the frequency of a preceding injury, a preceding infectious disease and a latent tuberculosis elsewhere speaks strongly for the metastatic origin.

Much has been written of gonorrhea and tuberculosis acquired at the same time. There is reason to look with some suspicion on these observations on account of the difficulty of distinguishing the tubercle bacillus from the smegma bacillus.

[1] Dickinson, W. H.: On renal and urinary affections N.Y. Wm. Wood & Co. 8 p. 87.

[2] Palet, Emil: Des résultats immédiats et éloignés de la nephrectomie dans la tuberculose rénale. Thèse, Lyons, 1893.

[3] Hadden and Anderson: St. Thomas Hospital Report, Vol. 20, 1892

The clinical history of these cases is illustrated in my cases and in those which every physician will revive from the memory of his own practice or from his reading. The beginning is insidious. There is usually a slight rise of temperature and some discomfort, sideache, backache, dragging or burning pains in the abdomen; but in other cases these symptoms are entirely wanting and the first symptoms are cystitis and pus in the urine. The diagnosis of renal tuberculosis presents the greatest difficulties and until very recently its absolute accomplishment has been declared by nearly all authors impossible in its early stages. Since the ureteral catheters of Pawlik and Casper have come into use an absolute diagnosis is certainly possible in many cases and in all cases the diseased condition of the tubercular organ can be detected and the healthy and competent condition of the opposite kidney can be established. This method is illustrated in my cases. On men it is necessary to use Casper's instrument.

The symptoms of renal tuberculosis are easily recognized, the fever, the pain, heaviness or tenderness, the cystitis, the pus in the urine and the granulating or inflamed condition of that portion of the bladder into which the ureter from the infected kidney opens.

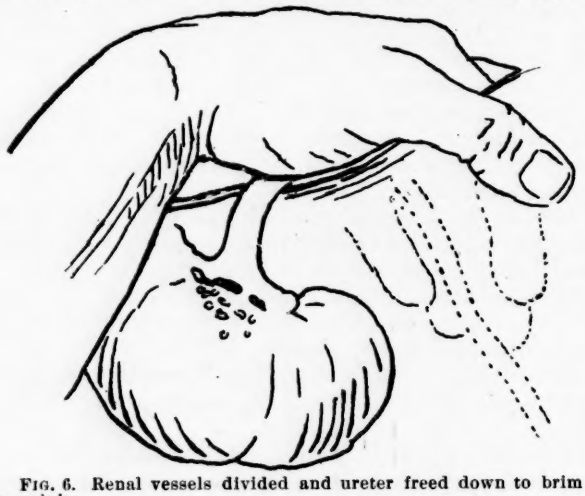

FIG. 6. Renal vessels divided and ureter freed down to brim of the pelvis.

The urine should be allowed to settle and the sediment precipitated by the centrifugal machine. The precipitate should be examined for tubercle bacilli. They may be found and then may be overlooked. If they are found it must not be forgotten that some of the best observers have mistaken the smegma bacillus for the tubercle bacillus. Mendlesohn[5] lately demonstrated a kidney removed a few days previously from a patient with the following interesting history. She had noticed that there had been some pus in the urine for months. There was some pain but no tenderness. The urine was found full of pus, fatty acid crystals, red blood corpuscles and oxalate of lime crystals. The Casper cystoscope was used and the normal rhythmic flow of urine from the right ureter was observed, while from the left ureter there passed out a steady stream of thick greenish pus that settled down into the bottom of the bladder. The ureters were catheterized and the urine from the right ureter found to be normal, clear and abundant, while pus alone was secured from the left kidney. Tubercle bacilli could not be discovered in this pus though they had been found in the urine before catheterization of the ureters. The diagnosis was, however, considered absolute, namely a tuberculosis of the left kidney with complete destruction of its function and a healthy and competent right kidney. The left kidney was extirpated and the kidney substance found almost completely destroyed. Two stones were found in the pelvis.

Professor Leyden in discussing this case called attention to the great difficulty of making a positive diagnosis of renal tuberculosis by examining the excretions from the kidney and finding the tubercle bacillus on account of the almost omnipresence of the smegma bacillus in pyelitis and the great similarity of this organism to that of tuberculosis. It is true there are differences; the smegma bacillus is more delicate and does not exhibit the granular divisions that the tubercle bacillus does, but the staining reactions are the same. Leyden thinks that the only reliable method of identifying the tubercle bacillus in such cases is by inoculation of animals. Senator and König agreed with Leyden.

Casper[6] gives an account of an interesting case illustrating the proper method of making an accurate and absolute diagnosis and as it brings out some new points it may be well to briefly abstract it here.

The patient was a woman 42 years old who had been well until six months before. At that time she took cold and had a catarrh of the bladder with painful urination and turbid urine. Then followed pain in the right side, with a sensation of tension. Irrigation of the bladder was tried without avail and at last through palpation some disease of the right kidney was diagnosed. When Casper first examined the patient he found her an undersized, delicate but apparently well-nourished and sound woman. She complained of pain in the abdomen, especially on the right side. The pain, she says, comes on with exercise and motion, and she is free from pain when resting in bed. Turning in bed, however, brings on the pain. Sometimes she is entirely free from pain whatever she does. She urinates oftener than formerly, during the day every three hours and two or three times at night.

The urine removed from the bladder with a catheter was slightly turbid, acid, specific gravity 1.018. It contained many pus corpuscles, some caudate epithelium, but neither red blood corpuscles nor casts. Albumin was present in considerable quantities. Tubercular bacilli were found in the sediment thrown down by the centrifugal machine. Palpation disclosed nothing abnormal. The kidneys could not be palpated. Neither the kidneys nor the region of the bladder were tender on pressure. The genital apparatus was apparently sound.

Casper's cystoscope was used to introduce 200 cubic centimeters of boracic acid solution into the bladder. This solution by irrigation quickly became clear and the surface of the bladder, except in the neighborhood of the right ureter, was seen to be perfectly smooth, whitish-yellow and glistening. Under the mucosa, the blood vessels could be seen as usual. In the locality where the right ureter ought to have been found, however, there was a granulating mass and the mouth of the ureter could not be seen. The mouth of the left ureter could be easily observed giving out every few seconds a spurt of clear urine. In the neighborhood of the granulation tumor around the

[4] Mitchell, Louis J.: Medical and Surgical Reports, Cook County Hospital, Vol. 1, 1890: Vol. 2, 1891.
[5] Mendlesohn: Berlin klinische Wochenschrift, April 27, 1896.
[6] Casper, L.: Die frühe und exacte Diagnose der Tuberculose des Harntractus, Berlin, klinische Wochenschrift, April 27, 1896.

mouth of the right ureter occasional whirls of fluid could be seen as if the ureter was discharging there.

On the following day the left ureter was easily catheterized and a clear normal urine removed. The right ureter was also catheterized by manipulation, though the mouth of the ureter could not be seen. Turbid urine containing pus and albumin was withdrawn, but tubercle bacilli could not be found in this specimen. Three days later the right ureter was again catheterized and the urine found to contain tubercle bacilli and a larger proportion of urea than the bladder urine. A diagnosis of tuberculosis of the right kidney and circumscribed tuberculosis of the bladder was made This patient was operated upon afterward and the right kidney removed. It was covered with tuber-

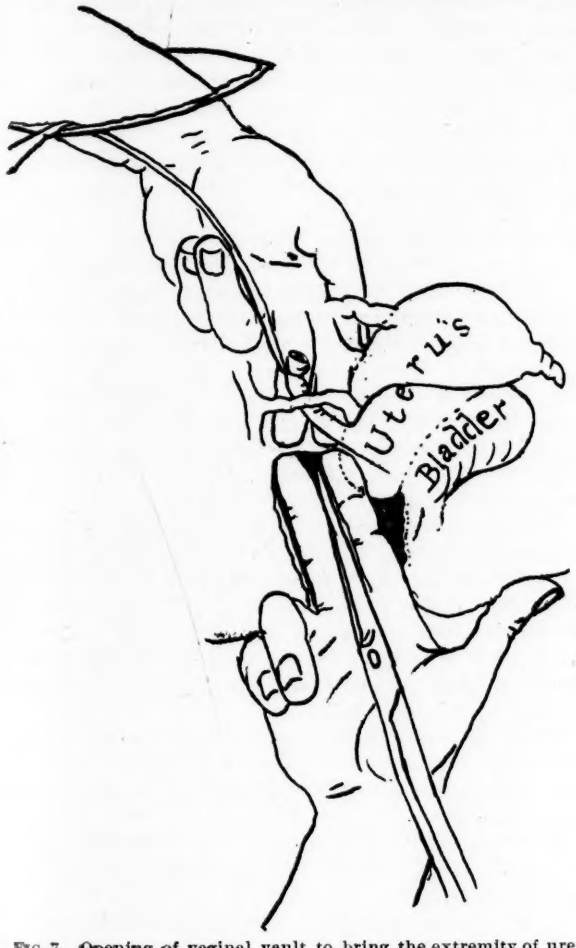

FIG. 7. Opening of vaginal vault to bring the extremity of ureter into vagina. The assistant's hand and scissors in vagina, operator's hand in lumbar wound after removal of kidney and abdominal portion of ureter.

cles and two cheesy foci were found in the parenchyma. The patient recovered and is well. The pain is gone and the urine clear.

When an absolute diagnosis of tuberculosis of one kidney has been made and when an equally positive demonstration of the healthy condition of the opposite kidney is at hand, then alone are the indications positive and absolute for the removal of the diseased kidney and ureter. This diagnosis may be tabulated as follows:

a. Tuberculosis of one kidney (absolute) secreting little or no urine.

b. Healthy condition of the other kidney secreting a normal amount of urine containing average amount of normal constituents.

c. Bladder only slightly involved near the ureter of sick kidney, patient otherwise in good condition.

Indications. Prompt removal of diseased kidney and ureter.

It may be asked on what data these indications depend; this study is of sufficient clinical interest to go into it more fully. The following questions will be asked and answered:

1. What is the course and duration of primary tuberculosis of one kidney if left to itself or treated medically?

Dickinson says all his cases terminated in death within four years after the onset of the disease. Belfield [7] says the disease always tends to a fatal termination; this end may, however, be delayed several years and cases are known in which the disease lasted ten, fifteen and seventeen years.

Tuberculosis elsewhere in the body is a progressive and destructive disease. It begins in the parenchyma of the kidney and advances through the ureter into

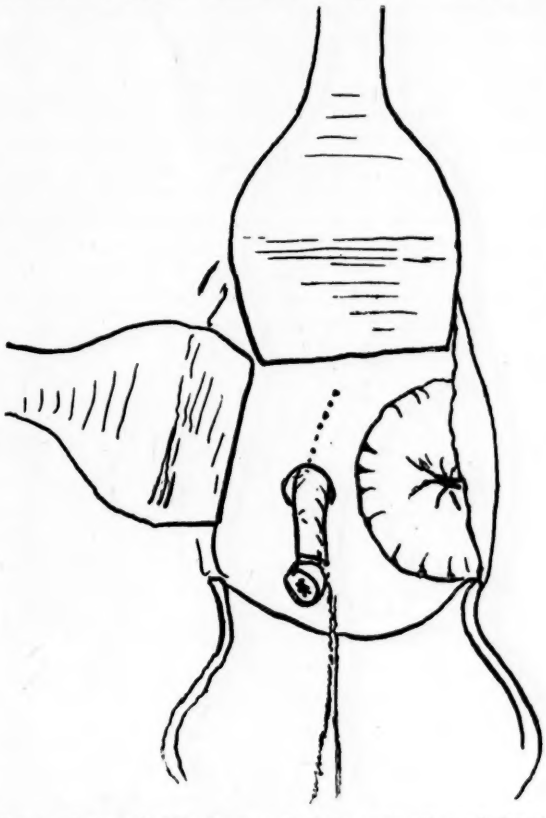

FIG. 8. Removal of the lower end of the ureter through the vagina distended with three retractors. The entire remnant of the ureter to be removed through incision in vault of vagina marked by dotted lines.

the bladder. Then it advances up the other side, but before this is accomplished the peri-renal tissues are invaded by the lymph channels, or the toxemia of secondary infection of the tubercular urinary tracts comes on together with temporary renal insufficiency and the exhaustion of cystitis.

2. What is the prognosis under nephrectomy? Very little statistic material is at hand. Palet (l. c.) records eight cases of death from general tuberculosis during the first six years after operation out of a total 136 cases operated upon, but the methods of diagnosis in those cases were imperfect as is shown by the fact that in seventeen cases nephrectomy was done with

[7] Belfield, W. T.: Diseases of the urinary and male sexual organs, N. Y., 1881, p. 254.

the other kidney so diseased that death from anuria followed immediately. In twelve of these seventeen cases the disease of the other kidney was tubercular.

There is an analogy which may be useful in this connection. The removal of local tubercular disease elsewhere in the body gives very good results. Tubercular foci in bones, tubercular lymph-glands and tubercular disease of the skin and mucous membranes can show a very large percentage of permanent recoveries after local mechanical removal.

Since there is only a small chance of life and that a very painful and miserable life, if the disease is let alone, and since the removal of the diseased kidney promises both theoretically and practically a great increase in the length of life and a greater improvement in its quality through relief from pain and the toxemia of secondary infection, *therefore in descending tuberculosis of one kidney with a competent kidney on the other side nephrectomy should be promptly performed.*

The 136 cases reported by Palet had so high a death rate that one would be slow to undertake the operation even on the above indications. When we come to analyze the deaths a different conclusion may be reached. Of the fifty-one deaths, seventeen died of anuria through disease and resulting incompetency of the other kidney. All of these cases could have been eliminated by the use of the ureteral catheters. Shock was the cause of death in eleven cases and usually in abdominal nephrectomy. The statistics are all against this method, which was used twenty-two times in Palet's series. In four cases death was due to unforeseen accidents, and in seven cases no postmortem was made.

In fifteen of Palet's cases fistula remained a long time, due, he thinks, to the tubercular stump of the ureter. On account of this unpleasant sequela and the danger which the tubercular stump might be, Howard Kelley's method of removing the ureter through the vagina should be used in all cases of nephrectomy for tuberculosis of the kidney in women.[8] This is done by following the ureter down with the fingers after tying of the renal vessels and bringing out the kidney. The stages of this operation are beautifully described and illustrated by Dr. Kelley. A reproduction of sketches of these pictures and a synopsis of one case will best give an idea of this exquisite procedure.

The patient was an unmarried woman, 23 years of age. As a child she began to complain of pain and weakness in the back, which compelled her at 9 years of age to remain in bed six weeks. She suffered from frequent urination, which was markedly worse after an attack of scarlet fever when she was six years old. For four years she has urinated so frequently that she could pass but a few drops at a time with great pain. A year ago she had an attack of spasmodic pain in the region of the left kidney, accompanied by vomiting and followed by pain in the bladder. These attacks have been frequent since, some time occurring as often as once a week. The attacks lasted from one to three hours.

Repeated examination of the urine showed it to be always acid, amber colored, containing albumin, pus, hyalin and granular casts, and had a specific gravity varying between 1.015 and 1.020. By vaginal palpation the left ureter was found transformed into a cord three times the normal size. On the right side the ureter was not sensitive and not enlarged. The left kidney could not be palpated. The left ureteral orifice was found by cystoscopic examination deeply injected and surrounded by an area of granulation tissue two centimeters in diameter and extremely sensitive to touch and bleeding easily. The ureteral catheter was passed into the right ureter and normal urine obtained, but it was found impossible to catheterize the left ureter, either by sight or touch. No tubercle bacilli could be found.

In view of all these facts it was nevertheless decided to remove the kidney and ureter and that portion of the bladder that seemed to be infected with the tubercular disease. The operation was performed Dec. 18, 1895. The incision commenced just in front of the vertical muscles of the back at the costal margin and downward toward the middle of the ilium crest, and then in a gentle curve around the anterior spine and two centimeters from it and from this point in an oblique line downward to the lower terminus of the left semi-lunar line an inch above the symphysis pubis. The upper third of the wound was first made, the kidney detached, the renal vessels tied, the kidney removed and the ureter separated down to the pelvis. The lower portion of the incision was then made, the ureter freed with the fingers, the round ligament pushed aside, the uterine artery and veins ligated and divided, and the ureter clamped and tied two centimeters from the bladder. The kidney with ureter 23 centimeters long was then removed. The assistant then punctured the vault of the vagina and the lower end of the ureter was brought into the vagina as shown in Figs. 7 and 8. No ligatures were used except those on the renal vessels and the uterine artery and vein.

The pathologic examination demonstrated advanced tuberculosis of the kidney, but tubercle bacilli could not be demonstrated in the caseous material nor in the milky fluid in which it was suspended. The healthier portions were filled with many small white tubercles. The upper portion of the ureter showed a slight infiltration with leucocytes near slight defects in the mucous membrane.

There are reasons enough to make the following summary:

1. Tuberculosis of the kidney is a relatively common disease.

2. It usually begins in the kidney itself, descends through the ureter to the bladder and ascends to the opposite kidney.

3. It is, therefore, for a long time a unilateral disease.

4. It is a progressive and destructive disease not subject to improvement through medication, offering an unfavorable prognosis as to life and comfort and subject to extension downward by the urinary tract and outward through the peri-renal lymphatics.

5. Diagnosis can be made through the symptoms of cystitis, with a low temperature, rapid pulse, dilatation of the heart, the detection of tubercle bacilli in the urine, tuberculosis of the bladder about the orifice of the ureter of the diseased kidney, pus or blood with tubercle bacilli and diminished normal constituents in the urine from the diseased kidney; normal urine in increased quantity from opposite kidney; sometimes tenderness, pain and tumor *in situ* of diseased kidney and ureter.

6. The indications in case of an absolute diagnosis of tuberculosis of one kidney and healthy opposite

[8] Kelley, H. A.: Nephro-ureterectomy, extirpation of the kidney and ureter simultaneously. Johns Hopkins Hospital Bulletin, 1896, p. 81.

kidney are immediate removal of the diseased kidney *and its ureter;* in case of disease in both kidneys, no operation should be performed.

7. The competency of the healthy kidney should be proved by repeated catheterization of the ureters before nephrectomy and the removal of all toxic elements from the blood should be secured by a liquid diet, irrigation of the colon and hydration of the whole system for some days before the removal of the kidney.

8. Lumbar, extraperitoneal nephrectomy is the safer operation.

9. In women the removal of the ureter should be completed through the vagina.

10. Any remaining tuberculosis of the bladder should be treated locally by curetting or cauterization.

11. Catheterization of the ureter is not a dangerous procedure and it may easily be accomplished in women with the simple cystoscope of Simon, Pawlik or Kelley, and in men with the more complicated instrument of Casper.

A FEW REMARKS ON THE PATHOLOGY OF SYNOVITIS HYPERPLASTICA GRANULOSA OF THE SHOULDER JOINT.

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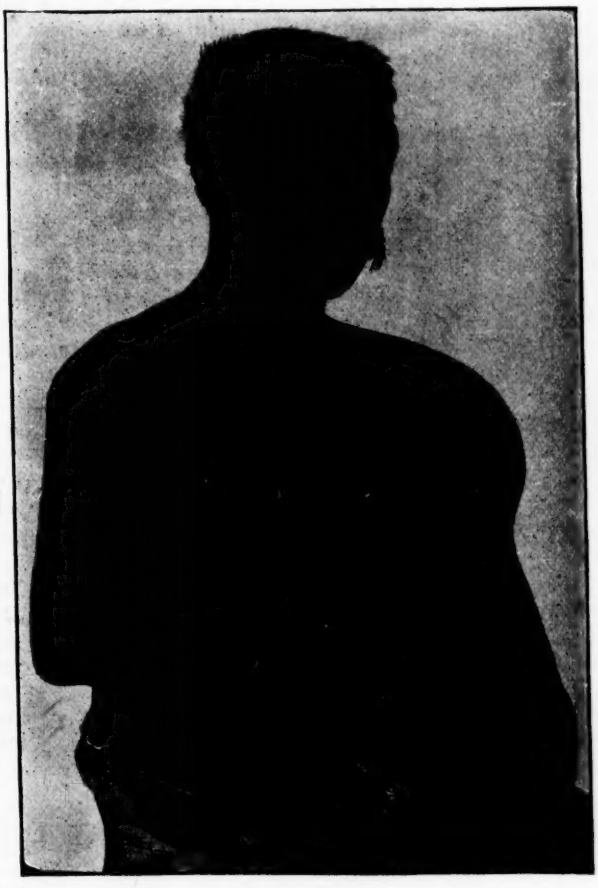
Tuberculosis, which has such great predilection for bones and joints, appears to prove the rule by its exception as regards the shoulder joint. Its comparative infrequency is shown from the fact that in the surgical clinic of Göttingen from the years 1875 to 1891, there were only sixty instances of shoulder joint tuberculosis; while during the period from 1875 to 1882 there were 174 cases of tuberculosis of the knee. In the great majority of cases of tuberculosis of the shoulder joint, caries sicca, that peculiar manifestation of this disease which was first so accurately described by Volkmann, is almost invariably found. Caries sicca is a very mild form of tuberculosis, consisting of molecular decay with a consequent cicatrization, and very frequently terminating in a spontaneous recovery. Synovitis hyperplastica granulosa was called by Billroth fungous synovitis. The tuberculous nature of this affection was determined by Köster in 1869. While it is very frequently found in the knee joint, and is characterized externally by the white spindle-shaped swelling, the well-known tumor albus of the old authors; on the other hand, it is extremely rare in the shoulder joint. The shoulder joint is a peculiarly constructed joint. It differs from the other enarthrodial joints in that it has numerous bursæ, which may communicate with the joint proper, or if the communication is not complete, they form points of least resistance for the dissemination of disease, the three most important of which are the bursa synovialis subscapularis, bursa synovialis intertubercularis and the subacromial bursa. The capsular ligament is of considerable laxity and admits of great distension. It is composed of closely interwoven fibers, and is fixed to the scapula above by being attached to the margin of the glenoid cavity and the root of the coracoid process. Posteriorly it is attached to the rough surface of the glenoid process. Below the glenoid fossa, the capsule blends with the origin of the long head of the triceps. Below it is fixed to the anatomic neck of the humerus. The capsule is strengthened materially by the tendons of the shoulder muscles which pass over the capsule from the dorsal and ventral surfaces of the scapula, and are inserted into the tuberosities of the humerus. With a brief review of the anatomy of the region, it is more comprehensible to understand the emigration of the tubercle bacillus into surrounding structures. Fungous synovitis of this joint is found in adult life, as a rule. The primary focus may be in the epiphyseal line of the head of the humerus, and secondarily cause a synovitis fungosa of the joint cavity and its adnexa. Osteal tuberculosis of this joint is almost without exception found in early life, when the embryonic tissues of the epiphyseal line are undergoing great transformation. The blood vessels are then immature and favor localization of the specific microbe; but even if the primary focus be of osteal origin, fungous synovitis following is the exception, as osteal tuberculosis of this joint is very prone to be of the caries sicca type. On the other hand, synovial tuberculosis irrespective of location manifests itself during adult life, and synovitis hyperplastica granulosa of the shoulder joint is no exception. The primary focus is in the innermost layer of the capsular ligament or of one of the bursæ. The disease is inaugurated by a slight hydrops, due to a pathologic secretion by reason of microbic irritation. This catarrhal stage does not last long before here and there the continuity of the membrane becomes studded with minute tubercles, the catarrhal synovitis now having merged into a synovitis hyperplastica, s. pannosa. The membrane becomes very thick and hyperemic, and in due course of time the minute tubercles undergo casea-



tion. If this pathologic process is not interfered with, the endothelial cells assume great proliferative power, and as a result the capsule becomes filled with tubercular granulations; the evolution from a catarrhal synovitis into the pannus type, and lastly into the synovitis hyperplastica granulosa. The granulation masses do not only extend into the joint cavity itself, but also infiltrate into the subsynovial layer; especially is this the case where the subsynovial fat is abundant. The para-capsular tissues become edematous. If any of the bursæ have direct communication with the joint there is immediate extension of the disease, while if there are delicate septa intervening, they give away to the pathologic pressure. As a consequence, the whole shoulder region becomes immensely swollen, the normal contour being entirely lost. If the subacromial bursa is concerned, the prominences of the acromion and coracoid can be elicited only with great difficulty. The consistency of the swelling is variable. It may be quite tense, reminding one of the tumor albus of the knee joint; or it may be fluctuating, manual palpation giving the hand the sense of a cavity containing fluid. This is not true fluctuation, but pseudo fluctuation caused by intra- and extra-capsular granulation masses. Upon exploratory puncture with a trocar, there can be forced out of the canula a few granulations, fibrin and detritus intermingled with synovial fluid, if a portion of the synovial membrane remains intact. Akido-peirastic gives information as regards the density of the swelling. The supra-clavicular and axillary glands in the course of time become hyperplastic. There is often great pain in the region of the brachial plexus due either to a neuritis or pressure. The swelling in this region should not be confounded with sarcoma of the epiphysis of the humerus, a very rare disease indeed. Here the capsule is also filled with effusion. After the capsular ligament and the bursæ become destroyed, the cartilages and even the bone itself become implicated.

The case illustrated is a patient who was in my care a few months ago. It is typical of this disease and is especially interesting in that both shoulders were affected. The swelling and edema were enormous on the right side, the disease being in its incipiency on the left. The principal bursæ were involved, also the para-articular structures, especially those posterior to the joint.

ANTISTREPTOCOCCUS SERUM IN THE TREATMENT OF CONSUMPTION.

BY W. H. WEAVER, M.D.

CHICAGO.

For the past decade and more the tubercle bacillus has been studied and discussed to such an extent that the presence and activity of other germs as factors in the pathologic processes occurring in consumption were entirely disregarded. That the tubercle bacillus is present and determines the general character of the disease by initiating the inflammatory action is admitted. Tuberculosis of itself is not a suppurative process, hence the appearance of pus in the sputum must be considered as the beginning of a secondary infection which is more rapidly destructive. I believe that a simple tuberculosis of the lung is a mild disease and easily cured if proper antiseptic and hygienic measures are pursued. But it is seldom that a case of simple tubercular phthisis in the earlier stage comes to the physician. It is only after the complications begin that the patient feels sick enough to consult his medical adviser. It is a question just when the streptococcus complication occurs in any particular case; but with the onset of fever and purulent expectoration may be found the streptococcus in the sputum. Dr. Prudden last year showed that the rapid inflammatory symptoms with cavity formation were due to the pyogenic action of the streptococcus. These destructive processes are slow or rapid according to the activity of these pyogenic germs. This germ activity must be checked and if possible abolished if the physician is of any assistance to his patient.

When the streptococcus infection accompanies the tubercular process from the beginning with high temperature and active germ life the invasion and destruction of lung tissue is rapid, and the case is one of rapid phthisis. Just why this germ activity is greater in one case than another, is a matter for future determination.

Now, antistreptococcus serum as prepared by Marmorek has the property of killing the streptococcus in the blood and the tissues while it is absolutely harmless to the patient. It can be used in conjunction with any other treatment, and gives immediate results. It may be expected from the administration that by the following day the temperature will be greatly reduced; also there will be a considerable reduction in the amount of expectoration. By the end of two weeks the expectoration will be reduced from 50 to 75 per cent. less offensive and less purulent. The cough will also be less harassing and frequent and the patient improved in every way. These results must be the more permanent when the serum is used early in the case. The cases in which I used it were all necessarily fatal cases, one having intestinal tuberculosis and the other two far advanced, with large cavities, and great emaciation.

Case 1.—Mrs. N. D., age 28, a case of rapid phthisis with extensive cavity formation in the right lung and consolidation of the left upper lobe. Temperature range of 7° F. and pulse 120 in the morning to 150 in the afternoon. Examination showed the sputum to be almost a pure culture of tubercle bacilli. June 25th, antistreptococcus serum was given and repeated every second day for three doses. After this the temperature remained below 100 for two weeks and the expectoration and cough was greatly reduced. The patient's general condition was greatly improved by the use of serum.

Case 2.—H. C., age 20, has had consumption for about six years, with a large cavity formation in the right lung, constant cough and expectoration, emaciation and loss of appetite. There occurred in this case a peculiar form of septic absorption which resulted in multiple inflammatory foci about the face, scalp and neck, which would certainly have resulted in abscesses but for the use of antistreptococcus serum. After a single dose of the serum the deposits disappeared, the temperature which was above 101 F. reduced to below 100 F. Expectoration was greatly diminished and considerable general improvement established.

Case 3.—Mr. E. E., age 22, had consumption for about one year, tuberculosis affecting the right upper lobe. For over one month has had tubercular diarrhea. The use of the serum in this case reduced the cough and expectoration about one-half and gave great relief, which continued up to the day of his death, two weeks later.

It will be observed from the nature of the disease under consideration and the remedy itself that it is not proposed as a cure for consumption in the sense of a specific, but as a valuable remedy for some of the most terrible complications which occur in the course of the disease. I am thoroughly convinced that by the intelligent use of this serum together with other appropriate treatment the ulcerative complications as well as the disease itself may be robbed

of at least some of their terrors and disastrous results. With this serum as with serum therapy in general the earlier it is used the better the results attained.

126 State Street.

RESECTION OF TWO INCHES OF THE HUMERUS AND WIRING, WITH A REPORT OF A CASE OF WIRING OF THE CLAVICLE FOR UNUNITED FRACTURE.

BY STEWART L. McCURDY, A.M., M.D.

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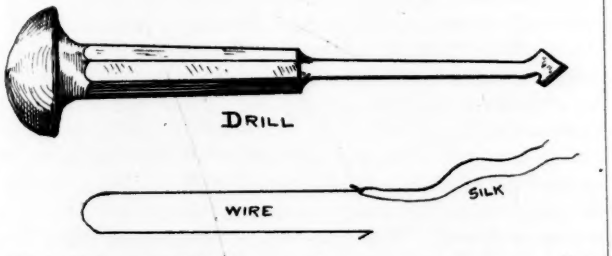
PITTSBURG, PA.

It is a matter of selection, after excision of joints or resection of bones, whether nails are selected to secure the bones, or whether wire is used.

Possibly I am stating the facts, when the statement is made that the majority of surgeons prefer spikes to wire. Especially is this true for excisions of the knee.

It is not the adaptation of bones after excisions for chronic tubercular disease, I desire to consider, but rather the use of wire for the treatment of compound and irreducible fractures.

FIG. 1.



That it is possible for me to secure a more perfect adaptation of bones by the use of wire goes without further discussion. That other operators can not get as perfect results with wire and use spikes instead, also goes with saying. Whether these men have tried wiring and discarded it for the nails, I am unable to say. To attempt to do a bone wiring without the proper instruments would be as difficult as to do a vaginal hysterectomy without an equipment.

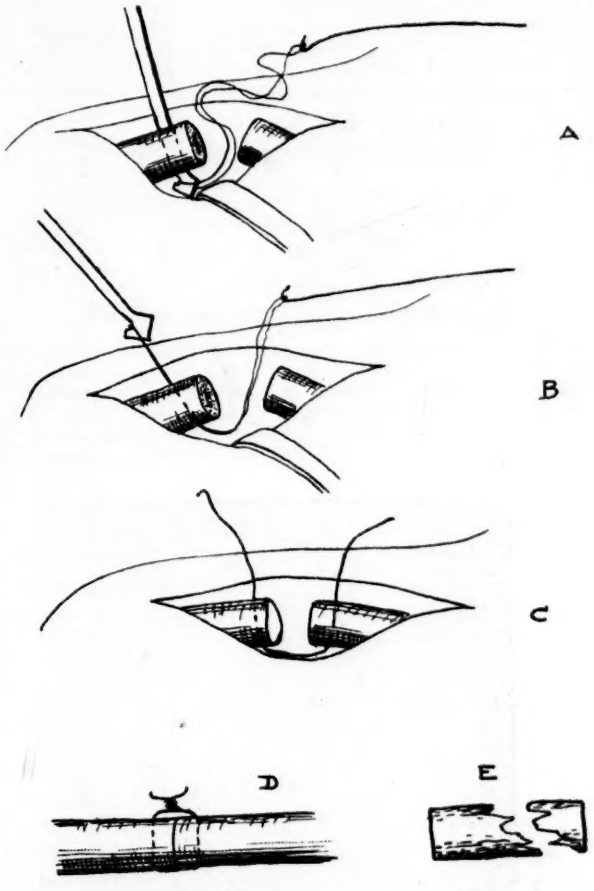
To Dr. Wm. F. Fluhrer of New York, must be given the credit for perfecting instruments for bone wiring. In order that bone wiring might be speedily done it is necessary to use a notched drill. It is an easy matter to pass a drill through a bone, but it is not such an easy matter to keep the drill hole pervious or reënter again after the drill has once been withdrawn.

As will be observed the drill is notched near the point. After it passes through the bone a silk thread is thrown around the point and allowed to engage in the notch, after which it is withdrawn. The drill hole once loaded with silk, the wire is attached and drawn through either way as desired.

Case 1.—Mr. P. F., aged 35, was thrown from a carriage and received a dislocation of the left shoulder and fracture of the left clavicle. After reduction of the dislocation the shoulder recovered promptly. The displacements of the fragments in the fractured clavicle were so great that no effort was made by nature to repair the injury. About six months after the original injury he was again injured and the shoulder was dislocated. The ununited fracture of the clavicle was more or less disturbed.

The fracture was painful at all times when the arm or shoulder was moved. The internal end of the external fragment appeared to be sharp and the patient, if he had had the

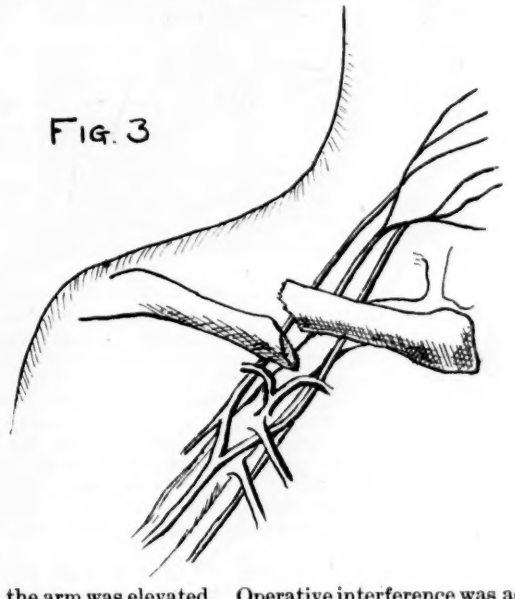
FIG. 2.



power in the arm, could not work on account of the pain caused by the motion.

A study of the anatomy of the parts (Fig. 3) shows that the free end of the under fragment was pushed down on the tissues overlying the subclavical artery and brachial plexus, when

FIG. 3



even the arm was elevated. Operative interference was advised for two reasons: 1, that union of the bones might be

secured; 2, that the pain caused by the projecting end of the bone might be relieved.

Operation: Free longitudinal incision was made along the clavicle and the ends were dissected out. The ends were sawed off by the use of a chain saw. The bones were drilled and brought together with silver wire.

Result: Union was perfect, and the wound healed without suppuration. The arm is practically as good as before the injury. The wire was subsequently removed.

Case 2.—H. B., aged 30, brakeman, received an injury of his left thumb while making a coupling. The muscles of the palmar surface of the thumb were squeezed through the skin, and the bone was broken; the thumb was practically torn off. Preparation was made to amputate. While my assistant was

FIG 4.

anesthetizing the patient, it occurred to me that wiring might save the thumb, and the latter operation was done. In six weeks the wound had entirely healed and in three months the thumb was as well as before the accident, save some limitation in extension as a result of the extensive laceration of the muscles. This was my first wiring and was done in June, 1885.

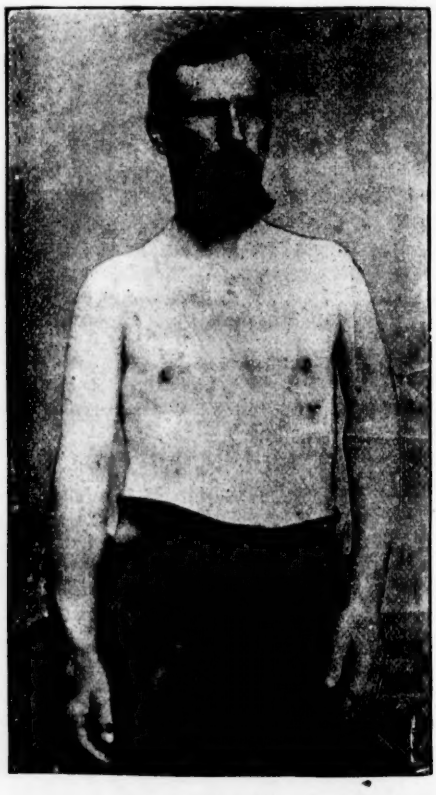


FIGURE 5.

Case 3.—D. W. C., aged 37 years. The contents of a shotgun had passed through the arm internally to the thickest portion of the biceps and making its exit near the insertion of the deltoid. The humerus was entirely torn off; the patient favored amputation at my first visit, but we concluded to adjust fracture and wait for results.

The bones showed no signs of union, and the case was complicated by a severe hemorrhage three weeks after the injury, and at this time the patient insisted upon amputation. I assured him that amputation was not demanded, but instead I would advise excision and wiring, which operation was done, three weeks after the injury.

Two inches of bone were removed (Fig. 4), and the bone adjusted the wire. The ends of the bone were ragged and showed no evidence of repair.

The case from the date of wiring did not have an unfavorable symptom, and in six weeks was entirely healed.

The man is a farmer and has made a full hand at every kind of work ever since. The two inches of shortening did not interfere with this in the least. (See Fig. 5.)

Description of cuts: Fig. 1 shows notched drill, the wire and silk and the method of attaching them. Fig. 2 shows, diagrammatically, the method of loading the drill hole with the wire as the drill is withdrawn, as well as other steps in wiring. Fig. 2 E shows the bone removed in the clavicle case.

SELECTIONS.

The French National Population Alliance.—The London *Times* states that an organization, with medical men at its head, has been formed in Paris to stay the French population's decline. The organizers are Dr. Jacques Bertillon, chief of the bureau of statistics of Paris, Dr. Charles Richet, professor of the faculty of medicine in the same city, and Dr. Javal, member of the Academy of Medicine. For years these men have noticed with regret that the population of France was not increasing proportionately with the population of other countries, and now they come forward with what they believe to be an infallible remedy for this evil. That some drastic remedy is needed they insist, as otherwise France must soon sink to the rank of a second rate, or even a third rate nation. A hundred years ago the great countries, in other words, the great powers of Europe contained 98,000,000 inhabitants, of whom 26,000,000, or 27 per cent., were residents of France. To-day these same countries contain 300,000,000 inhabitants, of whom 38,000,000, or only 12 per cent., live in France. These figures speak for themselves, and the obvious conclusion, according to Dr. Bertillon and his colleagues, is that if the births continue to decrease at the same ominous rate, France, which was once one of the most powerful countries in Europe, will soon be one of the weakest. These gentlemen have begun their novel campaign by founding a society which is styled "The National Alliance for the Relief of the French Population." The defensive measures which they propose to adopt are numerous, but for the immediate present they will confine their attention to three points: 1, they will try to get the laws relating to inheritances greatly modified; 2, they will try to get all direct taxes removed from those families which have more than three children, and 3, they will try to have the laws relating to succession duties thoroughly reformed. As it is manifest that the nation's treasury would be seriously affected by the removal of taxes in the case of all families which have more than three children, it is proposed to place a tax of 1-5 per cent. on all families which are childless, or have only one or two children. There is said to be excellent reasons for these proposed reforms. The larger a man's family is in France, we are told, the more he is taxed, both directly and indirectly, with the result that thrifty parents do not care to have many children. Moreover, the parents' property must be divided among the children, and if the children are numerous and the property small, the disastrous results can easily be foreseen. In other countries the law of entail is maintained pretty rigidly and though its operation seems hardly equitable or natural, as regards younger children, it certainly seems to act in some degree as a preventive of depopulation. "Remove all burdensome taxes from fruitful families," say the members of the National Alliance, "and let Frenchwomen and Frenchmen know that even from a monetary point of view, it will be fortunate for them to have many children. Then as the national treasury must be supported, let us tax those adults who have few or

no children. Persons who have no children, or only one or two children, may reasonably be required to contribute a goodly quota toward the support of the state, whereas it is improper and unjust to expect any support from those parents who have to provide for numerous children. Do this, and France will soon become, as she was in the past, one of the greatest powers in Europe; fail to do this, and France will soon sink to the level of Denmark, Belgium or Holland." The members of the alliance intend to hold several public meetings and to publish several pamphlets setting forth their views. They offer membership to all who care to assist them, irrespective of creed or political opinions. Many persons throughout France have already announced their adhesion to the program of the Alliance, and it is confidently expected that in the near future the necessary bills in regard to succession duties and the abolition of taxes will be presented to the French legislature.

Cumol as a Sterilizing Agent.—The *American Therapist*, July, contains an interesting abstract of the work done at the Johns Hopkins Hospital, by Drs. Clark and Miller, with the agent above named. In January, 1893, a very serious reign of infection occurred in the gynecologic wards of the Johns Hopkins Hospital, which was believed to be due to catgut prepared by boiling in alcohol under pressure. The most perfect means of sterilization of catgut for surgical purposes is, unquestionably, by heat. Until the method of Benckisser and Reverdin, 1888, it was considered impossible to raise any form of animal ligature material to a temperature sufficient to render it sterile without making it brittle. Reverdin demonstrated that it was not the oil, as previously supposed, but the hygroscopic water in catgut, which caused it to become brittle when heated. If this is driven off by dry heat at a temperature of 70 degrees C., it can be carried safely up to a temperature of 250 C., without impairing its integrity. The complicated apparatus, consisting of a hot-air oven and a thermo-regulator, however, prevented the general adoption of the methods of these writers. Brunner found that the boiling point of xylol was 136 to 140 degrees C., and at once adopted it as a sterilizing medium, but Kronig found spores occasionally present in catgut, which were more resistant than the anthrax spores, with which Brunner had experimented. "After a further research Kronig found that the boiling point of cumol, a hydrocarbon compound, ranged between 168 and 178 C., and substituted it for xylol. After a careful review of Kronig's article, his method was adopted in the gynecologic department of the Johns Hopkins Hospital. Kronig's method is as follows: 1. Roll the catgut in rings. 2. Dry it in a hot air oven or over a sand bath for two hours at 70 C. 3. Heat it in cumol to a temperature (165 C.) a little short of the boiling point, for one hour. 4. Transfer it to petroleum benzine for permanent preservation, or if desirable, leave it in benzine for three hours, and transfer the sterile Petri dishes. A bacteriologic study of this method by the writers shows that the sterilization by this method is perfect, but that the transference from boiling cumol to benzine is open to serious objection. Clark and Miller have found from this investigation that benzine is not a germicide, also that it can not be rendered sterile by heat without danger and, therefore, have found it necessary to modify the method of Kronig as follows: 1. The catgut, twelve strands, is rolled in a figure-of-eight form, so that it can be slipped into a large test-tube. 2. Bring the catgut up to a temperature of 80 C., and hold it at this point for one hour. 3. Place in cumol, which must not be above 100 C., raise it to 165 C., and hold it at this point for one hour. 4. Pour off the cumol, and either allow the heat of the sand bath to dry the catgut, or transfer it to a hot-air oven, at a temperature of 100 C., for two hours. 5. Transfer the rings with sterile forceps to the test tubes previously sterilized, as in a laboratory. In drying or boiling, the catgut should not come in contact with the bottom or sides of the vessel, but should be suspended on slender wire supports or placed upon cotton loosely packed in the bottom of the beaker glass. Cumol, which is of a clear limpid or slightly yellowish appearance when procured from the chemist, is changed to a brownish color by boiling. The catgut is allowed to remain in the sand bath until the excess of cumol is driven off and it appears entirely free from any oily matter. A period of one to two hours is usually sufficient to dry it thoroughly. From the sand bath or hot-air oven it is transferred with sterile forceps to sterile test tubes, such as are used for culture media, in which it is preserved from contamination until ready for use. Small quantities should be placed in each tube, to obviate the necessity of opening them too frequently. In conclusion, it is well to bear in mind that while cumol is not explosive it is very inflammable, and great care should be observed in lifting the wire screen from the beaker glass to prevent drops of the cumol from falling in the flame or on the heated piece of metal on which the sand bath rests, as it will take fire, flare up and ignite the fluid in the beaker glass. Such an accident has occurred three times in our experience." There has been about one year of practical experience in the wards of Dr. Kelly and others, and this has left the distinct record of this agent as being the most satisfactory substance that has come under their observation for the purposes above described.

The Relation of the Urine to Disease.—Dr. M. D. Hoge, Jr., brings together in the August number of the *Virginia Medical Semi-Monthly* a collection of diagnostic points showing the effects of different diseases on the urine, with hints on treatment.

Acute renal hyperemia.—Blood; albumin (10 per cent. by bulk); small hyalin casts; quantity increased; sp. gr. reduced; reaction acid. Treatment: Produce a skin reaction—warm baths, pilocarpin, nitroglycerin, large quantity of pure water.

Passive renal hyperemia.—Quantity diminished; sp. gr. 1.025–1.030; color dark; reaction acid; urates increased; uric acid crystals; mucus increased; albumin present, but small in amount; small hyalin casts; a few blood corpuscles. Treatment. Increase the arterial tension, digitalis.

Acute Bright's disease.—Quantity diminished (at first); if quantity increases, either recovery or chronic nephritis follows; sp. gr. increased (1.025–1.030); color dark red (blood); reaction acid; urea diminished; albumin considerable; hematuria; renal epithelium; dark granular casts; hyalin casts; epithelial casts. Treatment: Non-nitrogenous food, milk, digitalis, lithia waters, small does of calomel, diaphoretics, hot bottles.

Chronic parenchymatous nephritis.—Quantity diminished; sp. gr. normal or diminished; color lemon or dark brown; cloudy by transmitted light; albumin in large quantity; urea diminished; chlorids diminished; fatty degenerated kidney epithelium; dark granular casts; hyalin casts; fatty casts. Treatment: digitalis, large quantities of water, small repeated doses of calomel, warm baths, jaborandi, nitroglycerin, non-nitrogenous food, milk, iron, strychnin.

Chronic interstitial nephritis.—quantity increased or normal; color pale and transparent; reaction acid; sp. gr. below normal; albumin, very small quantity; very few hyalin casts; granular casts; crystals of uric acid and calcium oxalate; urea diminished; phosphates diminished. Treatment: Symptomatic, bichlorid of mercury in minute doses.

Amyloid kidney.—Quantity increased; color pale; sp. gr. low (1.012); reaction acid; albumin considerable; hyalin casts; waxy casts. Treatment: That of causative disease.

Tuberculosis of the kidney.—Quantity increased; pale milky color; sp. gr. lowered; reaction alkalin; pus suspended; hematuria; bacillus tuberculosis. Treatment: Symptomatic; improving the general condition.

Cancer of the kidney.—Hematuria; albumin in small quan-

tity; quantity increased; pus; acetone; kidney débris. Treatment: Palliative; extirpation.

Renal gravel.—hematuria; quantity normal; color dark red; reaction acid; pus; urates and oxalates; small concretions; epithelium. Treatment: Restrict meat diet, no alcoholic or acid drinks, bodily exercise, vegetable diet, milk, large quantities of water, phosphate of soda, carbonate of lithium, anodynes.

Uremia.—Urea diminished (200 to 50 grains); uric acid diminished; quantity diminished; sp. gr. diminished; albumin; casts. Treatment: Diuretics, hydragogue cathartics, diaphoretics.

Diabetes insipidus.—Quantity enormously increased (ten to fifty pints); sp. gr. diminished; no sugar, no albumin; color pale and clear; reaction faintly acid; urea increased; phosphates increased; indican. Treatment: Tonics; valerian.

Diabetes mellitus.—Color light yellowish; sp. gr. much increased (1.030 to 1.045); reaction acid; quantity much increased; sugar 1 per cent. to 8 per cent. (half a pound per day); urea increased; acetone and diacetone; albumin (occasionally). Treatment: Strict diet, opium, Fowler's solution, cod liver oil, Silurian spring of Waukesha water.

Pyelo-nephritis ("surgical kidney").—Color, dirty yellow, pale and cloudy; foul odor; sp. gr. diminished (1.008—1.016); quantity diminished; reaction acid; rapidly undergoes ammoniacal fermentation; urea diminished; albumin present; pus, blood, epithelium; casts of bacteria. Treatment: Astringents, tannin, alum, lead, antiseptics, salol, chlorate of potash, milk in large quantities.

Pyelitis calculosa.—Quantity increased; color pale straw; sp. gr. diminished; reaction acid; pus; albumin; spindle-shaped epithelium; odor very offensive. Treatment: As above for surgical kidney.

Cystitis.—Pus; blood; albumin; color light; reaction alkalin (chronic); sp. gr. diminished; triple-phosphate; bacteria; bladder epithelium. Treatment: Bodily rest; light diet, large quantities of fluids, chlorate of potash, salol, gelsemium, turpentine, warm applications, washing out of the bladder, opium, suppositories.

Febrile diseases.—Quantity diminished; color dark; sp. gr. increased; urate deposits; hyalin casts; albumin: acetone and diacetic acid; urea increased; hemoglobin; grape sugar; phosphates diminished.

Anemia.—Quantity diminished; color pale; sp. gr. diminished; reaction neutral or alkalin; albumin (occasionally); hyalin casts; urea increased, kreatinin.

Leukemia.—Reaction acid; uric acid increased; albumin; phosphates increased.

Chlorosis.—Reaction alkalin; kreatinin.

Scurvy.—Reaction acid; pepton (constant).

Gout.—Uric acid diminished; phosphates diminished; albumin; hyalin casts; oxalate of lime crystals.

Cirrhosis of the liver.—Quantity diminished; urates (large quantity); urobilin.

PRACTICAL NOTES.

Use of Argon in Gonorrhea.—Dr. George K. Swinburne recommends the use of a 10 per cent. solution in the acute stages. The inflammation is quickly allayed and the discharge rapidly diminished.—*Jour. Cut. and Genito-urinary Dis.*, August.

Indications for Use of Papain.—Papain has been found beneficial in gastric troubles caused by a lack of sufficient HCl (dose from ½ to 1 gram three times a day), but it is absolutely injurious where there is excess of HCl or an ulcerous lesion.—*Semaine Méd.*, August 5.

Lactophenin.—Dr. H. D. Peterson says clinical tests have shown it to be of special value in relieving pain and reducing temperature gradually and maintaining it at a lowered degree, without frequent repetition. It is readily taken by patients who can not take antipyrin. It is not disagreeable to the taste and is easily administered.—*Med. Recorder*, August.

Results of Treatment of Whooping Cough with Ichthyol.—In eight cases treated it materially diminished the frequency and the severity of the attacks and shortened the course of the disease. No inconveniences follow its use and the general health improves. Dose, according to age, from 0.05 to 0.20 centigram a day, increasing to 0.60 and 1 gram.—*Semaine Méd.*, August 5.

Section of the Sympathetic in Exophthalmic Goitre.—Jaboulay of Lyons recently cured the exophthalmus, palpitations and trembling in a case of exophthalmic goitre in a young girl by cutting the cervical portion of the sympathetic on each side, above the middle ganglion on the right and below it on the left. A slight, transient local congestion was the only inconvenience.—*Semaine Méd.*, August 5.

Experimental Extirpation of the Stomach and Intestines.—Monari has been experimenting on dogs since 1892 to determine the effects produced by removing the stomach and intestines. He announces that the metabolism of the organism is not essentially affected, permanently, by total extirpation of the stomach. He also states that as much as seven-eighths of the small intestine can be extirpated without injury. The colon partially assumes the functions of the absent intestine. If more than nine-tenths are removed the animal succumbs to inanition. Monari concludes that man can have at least half of the small intestine safely removed.—*Cbl. f. Chir.*, August 1, from *Beiträge zur klin. Chir.*, No. 2.

Formalin Gelatin as an Antiseptic.—This is a hard, transparent substance, affected neither by heat, acids nor alkalies, but decomposed, when pulverized, by the action of the living cells of the organism in such a way that the antiseptic properties are being constantly liberated. Schleich of Berlin asserts that it will arrest in twenty-four hours any acute suppurating process and insure absolute asepsis to the course of every wound. It is passive on necrosed tissues unless moistened with the following solution: Pepsini, 5.0; acid. hydrochlor., 0.3, and aqu. dest., 100.0, when the disinfecting process goes on as usual. It is made by adding 25 drops of Schering's pure formalin solution to 500 g. of dissolved and cleansed gelatin. When dry the hard sheets are pulverized ready for use.—*Wien. klin. Rundsch.*, August 2, from *Therap. Monats.*, No. 2.

Treatment of Cholelithiasis with Potassium Iodid.—Dunin announces that we have in potassium iodid a most powerful remedy for this obstinate disease. He has employed it in over 100 cases with results which he calls "not merely satisfactory, but amazing." It is especially efficacious in those cases where the attacks are not so severe, but are almost continuous, which is usually the most difficult form to conquer. In one week the patient is relieved from pain and the region is less sensitive to pressure, while appetite, sleep and peace return. Dunin administers 0.3 to 0.6 potassium iodid twice a day for four to five weeks, and then a systematic course of mineral waters (Carlsbad) completes the cure.—*Therap. Woch.*, July 19.

Treatment of Enteroptosis with "Yeast" of Beer.—This morbid condition is extremely difficult to cure and often resists every treatment, even external appliances. Dr. Günzburg has obtained excellent results by the administration of a piece of dried beer yeast, the size of a pea or bean, three times a day. It produces an intestinal tympanism not diagreeable to the patient, which lifts and holds up the viscera, counteracting the tendency to displacement. The gases are due to the formation of carbonic acid, and do not resemble the gases of putrefaction in their effect on the intestinal absorption. The usual constipation is relieved and the appetite improves, while the patient soon begins to gain in weight. As this trouble is more

apt to occur in thin persons, this latter point is of much importance in securing a permanent cure. The only contraindication is actual gastrectasia.—*Semaine Méd.*, July 15.

Efficacy of Stypticin in Arresting Uterine Hemorrhages.—Stypticin possesses no oxytocic properties, but it has been found very valuable in arresting uterine hemorrhages, climacteric, uncomplicated and after retroflexio uteri. No inconveniences followed its use. It resembles hydrastinin in its chemic composition.—*Wien. Klin. Rundsch.*, August 2, from *Therap. Monatsh.*, No, 2.

Treatment of Hand Injuries.—Dr. William P. Nicolson says the beauty of an operation should be sacrificed to the more practical work of conservatism. Cut away with scissors such tissue as may be hopelessly destroyed, leaving whatever shreds of skin remain to cover stumps, even though skin may slough afterward. If a finger has been crushed completely off, remove projecting point of bone with forceps, covering the end, if possible, by means of any remaining shreds of skin. After securing fragments of fractured bone as nearly in position as possible and inserting sutures absolutely necessary, he treats practically all hand injuries by saturation, under rubber tissue, with listerin, camphorated phenol or similar antiseptics.—*Atlanta Med. and Surg. Jour.*, August.

Further Success with Serum Treatment of Syphilis.—Boeck of Christiana reports seven cases of recent syphilis cured by hypodermic dorsal injections of serum from a tertiary hydrocele. The effects were most favorable: the primary manifestations rapidly passed away, and the secondary period was shortened and attenuated much more than is the case with mercury or iodin although the latter are more effective in the primary stage. The amount injected at one time averaged two to three grams a day or every other day, with a total of 32 to 92 grams in each case, although one received a total of 300 grams. There was no other medication. Experiments five years ago with serum from a patient in the secondary stage failed entirely.—*Semaine Méd.*, July 15.

Cysticotomy, the New Operation.—In the *Progrès Méd.* for July 25, Baudouin describes what he calls "the new operation with a future." cysticotomy, which is for the cystic duct what choledochotomy is for the common bile duct, and requires the same technique. Only one of the ten observations reported resulted fatally, and that was accompanied by cholecystectomy. The indication is a large calculus engaged in the cystic duct, which it is impossible to dislodge by manipulation, or to crush without injury to the walls of the duct. The retention is sometimes due to a stricture. The abdomen opened, adherences released, the duct well in view, the calculus under the finger, the cystic duct is slit lengthwise above the calculus, and the opening made large enough to extract it without tearing the edges, as the walls are generally inflamed and easily lacerated. The only question is whether to drain or not, in a simple cysticotomy, when the adherences have not been numerous; of course a complicated operation requires draining and even tamponing. The operation is usually simpler than choledochotomy on account of the more accessible position of the duct. The operation is new to France, the observations being gathered from English, German and Belgian sources.

How to Sterilize Instruments without Danger of Rust.—Iron, steel and nickel only rust when exposed to the combined action of carbonic acid, moisture and oxygen. If any one of this triad is absent or neutralized the metal remains unaffected. Certain alkalies neutralize the carbonic acid in water, and when this is neutralized no rust forms on metals when immersed in it. After careful experiments, Lévaï has found that the best alkali for the purpose is natrium hydrooxydatum causticum (NaOH). He adds a small quantity of the crystals to boiling water, and after they are entirely dissolved and mixed, he immerses the instruments and boils them *ad libitum*, with never a trace of rust nor tarnish when they are taken out. One-fourth of 1 per cent. or even less of the natrium is sufficient, but it must be pure, with no sulphur, as this causes rust. If knives and scissors are wrapped in gauze to protect the edges, they can be effectively sterilized in this way without the slightest injury of any kind. It is equally effective and non-injurious for drainage tubes, etc., but it is not adapted for aluminum nor silk and it softens brushes. If the instruments are left afterward wet and exposed to the air rust will form, but they can be kept several hours, if necessary, in sterilized water to which 1.5 to 2 per cent. of the natrium has been added.—*Wien. klin. Rundschau*, August 2.

Malignant Orbital Tumors.—Dr. C. S. Bull's conclusions in regard to their course and prognosis, as influenced by surgical operations for removal, are as follows: 1. The prognosis of all forms of malignant orbital tumors, whether primary or secondary, is unfavorable; and if the tumor be primarily in one or more of the deep facial bones or their sinuses, the prognosis is positively serious. 2. Except in the case of encapsulated tumors of the orbit, surgical interference is almost invariably followed by a return of the tumor, and the growth of the secondary tumor is more rapid than that of the primary lesion. With each succeeding operation the period of quiescence in the return of the tumor grows shorter, and the rapidity of the growth increases. 3. The patient's family, and in certain cases the patient himself, should be told of the serious nature of the trouble and be warned that complete removal of all the disease germs is an almost hopeless task. The burden of the decision as to surgical interference must rest upon the shoulders of the patient. 4. Repeated operations in these cases undoubtedly shorten the life of the patient. While it is our duty to operate in order to relieve severe or unbearable pain, we should be slow to operate merely for the sake of relieving temporarily physical deformity, especially if we are convinced that by so doing we shorten the life of the patient, even if that shortened life is rendered more bearable.—*Am. Jour. of Ophthalmology*, August.

Two Tumors on the Head of an Infant.—The *Clinical Journal*, June 3, has remarks on the above subject, made before the North West London Clinical Society by Mr. Jackson Clarke. He showed an infant with two tumors on the left side of its head. The child was brought to him in the out-patient department, and its functions appeared quite normal. The tumors were situated over the upper part of the squamous suture. One measued 1 by ¾ inch, the other ¾ by ½ inch. Three possibilities arose in cases of congenital tumors of the scalp, viz., meningocele, encephalocele and dermoid tumor. Dermoids were generally single and subcutaneous, although often connected with the dura mater. It was necessary to remember that the brain was merely an epidermic structure, and that some dermoids were quite shut in by the skull and dura mater, lying occasionally in the substance of the brain. Meningocele ought to be more or less completely reducible within the cranial cavity; but in the child before them that was not the case. Moreover, meningocele, being fluid, should fluctuate, and should become tenser when the child cried. This child's tumors were firm, and the skull appeared deficient at their bases, while a piece of cartilage or bone covered the convexity of the tumor. The only fluctuating spot was at the back part of the larger and anterior tumor. The tumors did not pulsate, therefore he had concluded that something had formed under the skull and elevated up what could be called normal Wormian bones, and there was a gap in the skull where that bone would have fitted in had it not been so elevated. Probably the source of the displacement was the growth of a meningocele, but the two other kinds of tumor he had mentioned could not be excluded, because the Wormian bone would mask any pulsation. The tumors were not due to the use of

instruments at birth, the labor having been a natural one. Cephalo-hematoma in a newborn baby was generally subperiosteal, and followed the shape of one of the bones, stopping at the sutures. In the child exhibited, not only was a margin felt in the skull, which might be simulated by hematoma, but there was a definite cap of bone to the swelling. Mr. Clarke said that the treatment was, in the main, on the expectant plan. He would watch the progress of the case, instructing the mother to prevent the child receiving knocks or bumps on the head. If his view was correct, he hoped the Wormian bone would spread out as the child grew, and the gap thus become sealed up by the bone.

Injections of Salts of Iron in the Treatment of Anemia.—Riva Rocci of Turin, has a careful study of this subject in the *Policlinico* for May. His conclusions are that injections of the salts of iron produce improved conditions in anemia, but they do not cure it. They affect the consequences of a pathologic process, but not the process itself, and the anemia returns if they are discontinued. They stimulate the reformation of the active principles of the blood, and also excite a hyperemia more or less transient, in various organs, which is the greatest danger from their use. The dose varies according to the case and the preparation used. The possible inconveniences that may result are, in the order of their frequence: nausea, vomiting, cephalea, fever, diarrhea, albuminuria, cylindruria, hemoptysis, lypothymia and syncope. They are indicated whenever there are anemic conditions, when the anemia itself is of long standing, and other means have been tried and exhausted, when the condition of the alimentary system forbids the probability of successful internal medication, and also when it is urgent to have the anemic condition terminated as soon as possible. The injections are contraindicated when they produce gastro-intestinal disturbances, or symptoms of nephritis, or excessive fever, or when there is danger of hemoptysis.—*Revue Int. de M. et de Chir.*, July 25.

First Trials of Frigor Therapeutics.—The results of these new experiments with the excessively low temperatures secured by Professor Pictet of Geneva are paradoxical and inexplicable. The patient is lowered into a well in which the temperature is 105 to 110 degrees below zero, centigrade. It is not quite two meters in depth, and is about 65 c. in diameter. He retains his clothing and remains in the frigor bath ten minutes, his head uncovered and a warm covering about his shoulders to prevent the escape of the cold air and to protect his lungs. The sensation of this extreme cold is merely a refreshing stimulation, similar to that of a tepid bath, with an afterglow that lasts several hours. Instead of an increased dis-assimilation the quantity of urea was diminished 24 grs., 15 to the liter. The amount of uric acid fell from 0.52 to 0.33; of phosphoric acid from 4.9 to 2.1, the phosphates from 9.1 to 3.9; while the temperature in the mouth rose from 36.5 (normal) to 37.4 degrees. The pulse increased (one observation) from 87 to 102 in three minutes. In every case the temperature rose more or less, and the refreshing sensations with warmth and invigoration were experienced. Five baths cured Cordés of his gastralgia, improved his appetite, stimulated the functions of the skin and improved a tobacco bronchial cough. In one experiment the bath was not as cold as usual, and rose to -40 degrees during the ten minutes. The sensations were entirely different from those of the other baths and the cold seemed intense, possibly owing to the fact that there was more humidity, and the skin therefore more susceptible. Further reports are awaited with interest—*Jour. de Méd. de Paris*, July 26.

Reported Rapid Recovery from Phthisis Under the Maragliano Serum.—The London *Lancet*, July 4, reports through the medium of its correspondence from Rome that one of the early cases of the above kind and treatment has been progressing most favorably. The report in part is as follows: An authentic, well-certified case of treatment of tuberculosis by the Maragliano method comes from Spezia. A native of that seaport, A. B., aged 21 years, an able seaman by occupation, had since 1893 been suffering from phthisical symptoms, and on examination was found to have both pulmonary apices infiltrated with tubercle. The disease was not largely diffused, but it made steady progress, and by the beginning of 1894 the area of destroyed tissue was considerably increased. Both lungs were very seriously affected and A. B. was placed under Maragliano's treatment in the clinical wards of the Genoa Hospital. The injection of the serum was practiced continuously for two months till the close of Maragliano's summer course, by which time the patient had so far improved as to return to his native place. Convinced of the benefit he had received he returned to the ward as a patient in November of the same year and was once more subjected, under Maragliano's care, to the serum treatment. The case, though the progress of the malady had been arrested, was still a very serious one, and it was not till the close of July, 1895—eight months from the resumption of treatment—that substantial cure was effected. Several hundred injections had been practiced, and in the latter weeks of the treatment it was evident that A. B. was conquering the malady "hand over hand." He left the hospital at the end of July, as has been said, absolutely cured and since then has for six months been regularly on duty in the service of the royal navy. At present he is at Spezia, the object of no little professional interest, and described by the physician who last saw him as "sano come pesce." Maragliano has some severe critics among his compatriots, chiefly of the Neapolitan school. But is fair to add it that even in that quarter testimony in favor of his treatment is gaining in volume and authority.

Bacterial Diarrhea of Children.—Dr. L. E. Rardon of Cincinnati, in the *Lancet Clinic* thus refers to the summer diarrhea of infants: Astringents formerly extensively used have very properly been relegated to the waste dump as useless. 1. Summer diarrhea is caused largely by improper and unclean feeding, and is usually preventable. 2. Bacteria play a very important part in its development. 3. Hot weather has to do only in an indirect manner, as it promotes the growth and development of bacteria in the food supply. 4. Treatment consists, first, in eliminating all decomposing food from the bowels by cathartics, lavage and colonic irrigation. 5. Drugs judiciously administered are of great value, but are secondary in importance to prevention and management.

Gastro-Intestinal Catarrh.—In the treatment of cases of acute gastro-intestinal catarrh, due to indiscretions in diet, and attended especially with nausea, vomiting, diarrhea and abdominal pain, good results are secured in the clinical service of Dr. Eshner from the employment of the following formula:

℞ Extract of hematoxylon 8.0
Aromatic sulfuric acid 8.0
Camphorated tincture of opium 96.0

Dose: A tablespoonful every three hours if the bowels are moved that often; at longer intervals if the bowels are moved less often.—*Phila. Polyclinic*, August.

Intestinal Fermentation with Constipation.—

℞ Ext. aloes. . . . . gr. vi
Pulv. rhei . . . . . gr. vi
Benzosol . . . . . gr. ix
Ext. hyoscyami. . . . . gr. vi

Misce et ft. Caps. No. xii. Sig. One after meals.—Thos. Hunt Stuckey, M.D., in *Am. Therapist*, August.

Beri-Beri.—

℞ Aquæ. 150.0
Tinct. scillæ. 8.0
Tinct. digitalis. 2.0
Syr. quiniæ. 30.0
Ammoniaci (liquid). . . . . gtt. xii

Misce. Sig.—Two tablespoonfuls in water every three hours.—J. Dias Ribeiro, M.D., in *Dunglison's Coll. and Clin. Rec.*, August.

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INFORMATION WANTED.
It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second-class mail matter not having street address, would be placed in the general delivery to await call.

SATURDAY, SEPTEMBER 5, 1896.

THE U. S. MEDICAL PROFESSION AND THE MONTREAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN 1897.

The British Medical Association will meet in 1897 in Montreal. At once upon learning the fact, there will arise in the mind of every member of the medical profession of the United States the thought: What can we do to make the visit to America of our English confrères more enjoyable and useful, and to aid in deepening the professional unity, respect and affection which these two parts of our guild entertain for each other? Two things are prerequisite: The first is the establishment of a committee to take in charge the entertainment of our British and Canadian friends, and the second is the securing of funds to defray the necessary expenses.

To this end we suggest that the proper officers of the AMERICAN MEDICAL ASSOCIATION at once appoint three members from the ASSOCIATION to act with three members to be appointed by the Executive Committee of the Congress of American Physicians, the six to organize themselves as they may deem best and to have entire charge of the collection of funds and the plans and execution of the same for the entertainment, etc. As to the subscription we have no doubt sufficient contributions can be obtained from the various medical organizations of the country or even from private persons (the writer will give $25). We should be moved by every honorable motive to make the American tour of our visitors one of the most enjoyable and profitable for all concerned. But there should be no delay in getting to work.

THE USE OF PUBLIC MEDICAL SOCIETIES TO PAY PRIVATE GRUDGES.

Many years ago we knew of the following case: A physician of the best standing applied for membership to the principal medical society of the town. He was vouched for and recommended by the best members; there was absolutely nothing said or to be said against him as a reputable physician; no objection was made to him; he had in many ways shown himself strictly ethical in professional and private life, and his scientific ability was certainly equal to that of the average of the members. And yet he was "blackballed." Three members came—were careful to come!—sat silent when objections should have been raised, sat silent when the balloting went on, and voted against the admission of the candidate proposed. By the antiquated rules of the society three members were sufficient to exclude, although a hundred should vote in favor of admission. By one of the old-time fictions of the society, it should be said, the candidate did not ask for membership, was not allowed to apply—that would be beneath the dignity of the body—but instead of this simple, frank method, he asked his friends to sign his application, or if fully wise, asked some friend to get the signatures of others, and then asked the friend to present it. The applicant was supposed to be in profound ignorance of the desire of his friends to make him one of their corporate number. It thus came about that the three blackballers "turned down," not the applicant, but his fellow members who wished the applicant admitted. By another figment of the corporate machinery the ballot was supposed to be thoroughly secret, but in reality it was not so, and the three dissenting balloters were at once known not only to all the society's members, but to the applicant, supposedly in complete ignorance even of the fact that he had been proposed; and not only to them and him, but of course to all professional brethren, and finally to the lay public. This old individual case we are using only as a text and type of more general principles, but in passing it may be added that the motives of the blackballers soon became evident. They were recognized as unsuccessful rivals of the candidate in a private occupation, and were simply jealous of the candidate's success in the private work, and they determined to injure him by their secret ballot. These poor dupes of their own envy had used a public medical society to settle private scores. They cared nothing for the injustice to the individual or of the wrong to the society.

But what of the rules of the society that permitted such proceedings, and what of the plan of using an organization presumably founded and existing for strictly professional and scientific purposes? If the example we have used to typify a method were single or rare, or existed only in prehistoric ages, there would be nothing to say, but to any one familiar with medi-

cal politics and organizations it is a well-known fact that similar practices are by no means unknown in our modern world. It is possible that the antiquated rules governing present-day medical organizations have not been abrogated, and that self-seeking members, in many ways, use them and the societies they control for their hidden schemes.

If the fanciful figments and supposed ignorances, and presumed confidences or secrets of the council chambers and boards of censors were not the shams they are, it would be a very different matter. But who does not know that they are most ludicrous farces? The candidate hears, sees, feels forever the fact that he has been considered unworthy of membership, and his professional and public reputation is injured. If he is of a sensitive nature, the fact can not help harming his own character, rendering him morbid, perhaps, and in various ways preventing the best purposes and realizations of his life. If he "braves it out," he becomes unduly callous, and perhaps this injury is greater than the other. Possibly he may be strong enough to recognize the true status, and large-minded enough to prevent his indulging in anything but pity and a good-humored contempt of the foolish performance. This is the proper course, but it may be doubted if it often results so. He may even find not a little pleasure in the boomerang his unwise enemies prepare for themselves, and laugh at the fact that one prominent member advises him, after the custom of the French Academy, to call on the members of the committee or board of censors having his application under advisement, while another member vows if there is any such "solicitation and advertisement" he will surely blackball him. He may even enjoy the feeling that he is barefoot and attempting to walk a floor strewn with needles and tacks. But we question his enjoyment!

But if he has any innate sense of dignity and worth, he will have a disgusted contempt for the imaginary figments and open secrets of the guarded portals. Every member knows that he applies, and if he gets in at all, he does it by "politics" that all ignore and are supposed to despise. No single word of recognized or official reply comes from his application, and the irony of the situation is heightened by the fact that the society hugs its pompous "dignity" in silent satisfaction while proceeding to the utmost length of impoliteness and discourtesy. A society or a man has no genuine dignity without just as genuine courtesy and kindness, and when these latter qualities are wanting, a man of innate dignity may wisely reason that the assumed dignity of the society is—*assumed*. Discourtesy is undignified, and corporate discourtesy is none the less so because, as SIDNEY SMITH said, the corporation has neither body nor soul for proper treatment. It is just as incumbent upon an organization to be dignified to an applicant (or supposed applicant) as it is for the applicant to respect the corporation. It would be infinitely more manly to have the application made openly and frankly, and if it is refused to say so officially. A *no*, ever so blunt and brutal, is in every way superior to the savagery of no reply whatever to an inquiry.

And societies are none the less absolved from the duty of justice! Every member knows the blackballing becomes at once common talk despite the hundred fictions of assumed ignorances and secrecies. The machinery of these circumlocutions and mysteries and "supposeds" is arrant nonsense, and deceives nobody. It would not be an absurd thing if some day some indignant candidate should enter suit for damages against the organization that had refused him membership without a single objection raised or exposed, and thereby injuring his professional and social reputation. To be sure, no large-minded man would care enough for the affair to do so, but all men are not so strong in the estimation of the public or of themselves to thus contain themselves.

It would appear that some of the rules of some medical societies need thorough overhauling; that manly, truly dignified frankness displace sham and pomposity and a silly secrecy; that societies be as jealous of their justice and kindness, as of their "dignity;" that they think what effect their action and manner of action may have upon the candidate by refusal of membership, as well as of their own rights and privileges; that they devise methods of preventing the use of the organization by greedy, cranky or stupid members for paying private debts and grudges; or, of punishing such when obviously guilty. The welfare of the profession stands above that of societies, and the welfare of the society must be placed above that of the piques and bickerings of its members.

We by no means argue against care in the admission of new members to a society. We advise greater care. Objections to a proposed man should be brought out and discussed, not hidden; blackballers and cranks who fraudulently use the society in secret ways to settle personal or clique enmities should themselves be blackballed before they get in; if the figment of the society that it *chooses* and elects its new members is to be any longer worshiped as a fetich, the society should see to it that there is no wily and sneaky "politics" upon the part of members or applicants in getting in. (In the illustrative example we have used, the candidate could have easily "blocked" or neutralized the scheme of his blackballing friends if he would have stooped to something like their methods.) In these days of specialism, it may also be noted, the profession in a city is divided up into cliques and parties, and the hatreds and deep grudges and jealousies of rivals often become so intense as to override all sense of decency or justice, and men thus actuated

should not have it in their power to exclude and injure one they hate or fear. The envies and hatreds of rival medical schools, or the infinitely worse ones of rival professors in the same school, accentuate these internecine quarrels, and often reduce the general medical society of the place to a simple stamping and fighting ground where men may come to battle out their wraths, but with which the society should have nothing to do. There is room for much amusement and irony when a blackballed applicant is told by *these men* that he is unworthy their professional company!

THE BACILLUS OF PARESIS.

That paretic dementia, or, as it is more commonly designated, paresis, has in the vast majority of cases syphilis as its antecedent, is coming to be a generally accepted fact. The exact relation of the two disorders to each other are, however, still in question, and the syphilitic or parasyphilitic nature of paresis is maintained by some and as strongly disputed by others. If the infection of syphilis were as definitely known as is that of some other diseases, tuberculosis for example, the question would be more simple; we could search for the specific microbe, and if found the identity would be established. Other like questions have been settled in this way; the failure to find HANSEN'S bacillus in syringomyelia has been considered as conclusive against ZAMBACO'S theory of its identity with leprosy, and still other instances could probably be cited. With the present uncertainty as to what is the real nature of the syphilitic infection, there is no possibility of a definite conclusion as to the identity of it and that of paresis on purely bacteriologic grounds, but a very recent Italian contribution is very significant and suggestive. In the latest issue of the *Annali di Nevrologia*, Dr. PICCININO, one of Professor BIANCHI'S assistants, reports the results of a bacteriologic study of paresis in the laboratory of the Istituto Psichiatrico of the University of Naples. He examined the cortex in five cases, some of them with clearly syphilitic histories, others with it suspected or denied, using all antiseptic precautions and taking the specimens through openings made in the skull by trephining before the removal of the calvarium, as an additional security. Culture experiments and the usual staining methods gave only indeterminate or negative results; nothing very characteristic or noteworthy was discovered. The use, on the other hand, of a staining method only slightly modified from that of LUSTGARTEN for his syphilis bacillus, revealed a great abundance in all the tissues, and especially in the pericellular spaces, of a form apparently not very different from that described by the above author. The same method was tested as a control experiment in other brains than those of paretics, but with a uniformly negative result, and it was only by this staining reaction that these bacilli could be detected in the paretic cortex.

This paper has a special importance, in view of the question of the parasyphilitic nature of paretic dementia, and reflexly, as it were, also on that of the value of LUSTGARTEN'S discovery. It is a little remarkable that the research had not been made before. Had there been more faith in LUSTGARTEN'S bacillus as the cause of syphilis, or had the notion that paresis is only a late manifestation of that disease been earlier accepted by physicians, the very obvious suggestion of this special investigation would undoubtedly have been sooner taken up. It will be in order now to repeat PICCININO'S observations and to prove their value by widespread and careful investigations by our asylum pathologists.

STRENGTHEN THE ASSOCIATION.

The great increase in the membership last year should be only a beginning. We appeal to each member to use his influence to secure a new member by application. Let the good work go on until every regular physician in the United States is enrolled in the membership. Of this issue we print 9,000 copies and it is contemplated to continue to print not less than that number each week. The extra numbers will be sent to physicians who are eligible to membership in our ASSOCIATION in the hope that they may join us. Secretaries of local medical societies in affiliation with the AMERICAN MEDICAL ASSOCIATION, are requested to use their influence to increase the numbers of the great representative organization. Blank applications for membership will be furnished in any desired quantity on application.

The great improvement in our JOURNAL is solely due to the increasing interest taken by the members in making it better and to the large additions that have been made to the membership.

The object lesson furnished by the success of our JOURNAL, should be a sufficient demonstration of what it means to increase the number of members of the ASSOCIATION and the readers of the JOURNAL. Let us unite to make it the greatest medical weekly on the habitable globe. We have reason to be proud of the advance made in the past, but let that be as nothing to the improvement in the future. It could be made the greatest medical weekly in America in one week, if every present member would secure one additional one; and if that process were repeated the next week, the JOURNAL would in two weeks have the greatest subscription list of any medical weekly in the world. Will you, dear colleague, favor the ASSOCIATION in this way? Cut out an application blank from the advertising page of your JOURNAL and get your medical friend to sign it and send it on with the fee to Treasurer Newman and the object will be gained. Try it and let the semi-centennial report at Philadelphia next year show more than 10,000 actual members. It can be accomplished easily, will you do it?

We may strengthen ourselves and improve our JOURNAL by strengthening the ASSOCIATION, than which no organization ever had nobler aims or purposes, and every member will feel happier when he can truthfully say that he has done all he could to bring the whole profession in line under the banners of our ASSOCIATION, marching shoulder to shoulder in the sacred cause of humanity and science, and keeping step to the music of fraternal sympathy.

CORRESPONDENCE.

Unilateral Orchotomy.

NAVASOTA, TEXAS, Aug. 4, 1896.

To the Editor:—I herewith give in brief the history and operation of two cases of castration: C. S., aged 15 years; contracted continued malarial fever, which continued with no peculiar history until the third week, when orchitis developed in both testes without any disease of the genito-urinary organs, either during this attack of fever or previously. Later, it became complicated and terminated in orchi-epididymitis, becoming exceedingly painful. During the fourth week I was called in consultation, finding the morning temperature ranging from 102½ to 103 degrees; evening from 103 to 104 degrees, with considerable tympanitis, great emaciation, prostration, intense suffering, a suppurating testicle of left side and the right one enlarged and painful. Castration being determined upon, antiseptic precautions were rigidly enforced. Patient being anesthetized I cut away the suppurating portion of the scrotum, turned out the testes and ligated the spermatic cord, nerve and vessels in mass with catgut. All capillary oozing was then arrested by hot compresses and the wound closed with silk sutures, leaving no drainage. The wound healed by adhesion, the other testicle rapidly improved, temperature declined and general convalescence followed.

A. M. C., aged 65 years. Gave history of slight hydrocele from boyhood, very gradually increasing. Patient contracted gonorrhea, which gave him no little trouble, but finally terminating in orchitis, which kept him confined to bed for about three months; during which time he became very weak and emaciated. Temperature ranged from 101 to 103 degrees, due to pathologic condition of the right testicle. At the end of third month I was called in consultation. Removal of the diseased organ was decided on. The cystic portions of the testis was relieved by the use of the trocar. Then the scrotum was laid open and the testicle dissected out, as there was almost a continuous adherent tubercular attachment existed between it and the scrotum. The spermatic plexus was considerably enlarged and indurated, containing small cysts of pus. The cord and vessels were ligated as in first case, though much higher up above the tubercular tissue. The scrotum was then closed with silk sutures. No drainage was established, no suppuration followed; temperature declined and in ten days patient was able to be about his business.

D. F. PEEPLES, M.D.

Dr. Carl Wagner Disclaims Connection with the "Milwaukee University."

CHICAGO, Aug. 28, 1896.

To the Editor:—In regard to the article in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION of Aug. 22 ("Another Diploma Mill in Wisconsin") I would like to state the following:

On August 19 an article came to my hand which contained my name in connection with an *unlawful* institution called the Milwaukee University. I immediately sent a letter, of which I enclose a copy, to the said corporation. I also sent on the very same day letters to the States Attorney of Wisconsin, to the Secretary of the Board of Health of Wisconsin and to Dr. McDill, a prominent physician of Milwaukee, saying that I had nothing to do with that institution whatsoever, and asked the latter to make this known to his friends as far as lay in his power and to the medical society at large as far as possible; which he kindly promised to do. Then I begged the aforesaid parties to kindly inform me what means I should take to protect my reputation. I need only add that I will be pleased to appear in court to testify whenever I am summoned.

Very respectfully, CARL WAGNER, M.D.

[COPY.]

To the Milwaukee University: Gentlemen—Having learned that you used my name in your announcements as a director of the Milwaukee University, I ask you to withdraw my name from the list of your members immediately. I have never given you my consent to what you have done. I demand that you take all means within your power to see that my name in the future will be in no way connected with your enterprise, and also demand that all legitimate means be employed to recall the announcement already issued containing my name. If the above request is not complied with, I will instruct my attorney to proceed against your institution. Respectfully,

Aug. 20, 1896. DR. CARL WAGNER.

PUBLIC HEALTH.

Medical Inspector for Schools.—The Macclesfield (Eng.) School Board has passed the following resolution in regard to the question of medical certificates: "That, with a view to secure the more regular attendance of children at school, on the one hand, and to avoid unnecessary prosecution of parents on the other, a medical officer be appointed, whose duty it shall be to examine all children sent to him by the clerk, and to report as to their fitness or otherwise to attend school; and that the clerk keep a counterfoil record of children so sent; and that the medical officer be paid half-yearly at the rate of one shilling for each child so sent."—*Brit. Med. Jour.*

A Quaint Hygienic Decalogue.—The *Medical News* attributes to the late Dr. Frank H. Hamilton, of Bellevue Hospital Medical College, the following decalogue of health precepts: "1. The best thing for the insides of a man is the outside of a horse. 2. Blessed is he who invented sleep—but thrice blessed the man who will invent a cure for thinking. 3. Light gives a bronzed or tan color to the skin; but where it uproots the lily it plants the rose. 4. The lives of most men are in their own hands, and, as a rule, the just verdict after death would be—*felo de se*. 5. Health must be earned—it can seldom be bought. 6. A change of air is less valuable than a change of scene. The air is changed every time the wind is changed. 7. Mold and decaying vegetables in a cellar weave shrouds for the upper chambers. 8. Dirt, debauchery, disease and death are successive links in the same chain. 9. Calisthenics may be very genteel, and romping very ungenteel, but one is the shadow, and the other the substance, of healthful exercise. 10. Girls need health as much—nay, more than boys. They can only obtain it as boys do, by running, tumbling—by all sorts of innocent vagrancy. At least once a day girls should have their halters taken off, the bars let down, and be turned loose like young colts."

Attempt to Copy Michigan's Progress.—In the *British Medical Journal*, August 8, is a short article by James Adam Dick, M.D., vice-president Eastern Suburbs Medical Association, Sidney, New South Wales, relative to "An Experience in the Voluntary Notification of Diseases in Sidney." He says: "Having observed in the pages of the *British Medical Journal* since August 31, 1895, the accounts of the movement to establish a national system of registration of sickness in Great Britain initiated by Dr. Arthur Newsholme, the Medical Offi-

cer of Health of Brighton, it occurred to the writer that a brief note describing an effort made in the same direction at the antipodes, might be of interest to those who are working at this most important subject. . . . The movement in Sidney had for its origin the example of the sickness statistics of that progressive body, the State Board of Health of Michigan, U. S. A. Correspondence was entered into with the secretary at Lansing, Mich., who very kindly supplied several valuable pamphlets and books. The Eastern Suburbs Medical Association of Sidney resolved to initiate a scheme for the voluntary notification of those diseases causing sickness in the area comprised by the association." Instead of having weekly reports, as in Michigan, the attempt was made to get monthly reports. This was unsuccessful because, while it is quite possible for a physician to remember to make a report every week, it will generally be found impossible to remember to make a report at a given time after a much longer interval; therefore, unless a central office regularly notifies all the observers at the time the monthly report is due, there is a probability of a general failure. And, in Michigan, what was commenced made successful for a time as a voluntary service by leading physicians, has since been supplemented by weekly reports required under the law to be made by local health officers; and in recent years more attention has been given to the securing of such official reports than to those by volunteer physicians. The writer hopes that the discouraging experiences in Sidney may not tend to abate the enthusiasm with which Dr. Newsholme has taken up this subject. This important scheme is one that the British Medical Association should again take up earnestly and urge its adoption upon parliament.

Difference in the Death Rates Between the Sexes.—Tables made up from Massachusetts census reports, covering a period of more than a quarter of a century, show that from birth to 10 years of age the male death rate is in excess of the female. From 10 to 40 the female death rate is in excess of the male, while the next ten years the rate is about the same. From 50 to 60 the percentage of deaths is largest with the males, while beyond that time the excess is with the females. Among insurance companies men over 50 are regarded as better risks than women of that age, and a strong man of 50 is preferred as a risk to an equally strong woman of 45. Dr. J. M. French, in the *Medical and Surgical Reporter*, May 9, calculates that out of 1,000,000 persons born 511,745 are males and 488,255 are females, making an excess of 4.81 per cent. of males. Of this number he estimates that 83,719 males and 65,744 females die during the first year, which would reduce the per cent. of excess males to 1.31. At 8 years of age the per cent. of excess has been reduced to 1 per cent. From then to 18 years of age the male excess increases to 1.18, at 39 to 2.08, while at 50 the excess has declined to 0.93 per cent. At 53 the number is equal. It is believed to be proved by statistics that while more women than men reach old age, there are more men than women reach the century mark. In Massachusetts between 1880 and 1890 there were 203 deaths of persons over 100 years of age, and of these 153 were men and 50 were women. Thus it seems that while more males than females are born, and while more males die between certain ages, the percentage is yet in favor of the males. The fact that men go to sea and to war, that they engage in more hazardous vocations than women and are more exposed is urged as an explanation for the greater death rate between certain ages. The fact also that women suffer from want of exercise, impure air and faulty modes of dress is cited to show why more women than men die at some ages.

An Epidemic of Enteric Fever Among Children.—Dr. A. K. Bond of Baltimore contributes to the *Virginia Medical Semi-Monthly* a brief report of "an epidemic of twelve cases of enteric fever which occurred in a home for destitute children in Baltimore. The patient's ages in years were, respectively, 12, 7, 9, 3, 8, 4, 5, 7, 4, 4, 5, 19. The fever lasted from fourteen to eighteen days in the five youngest, whose ages ranged from 3 to 5 years. The temperature ranged between 102.3 and 103.5 degrees. In the next older group it ranged between 104 and 105.5 degrees. Headache was a frequent symptom at the beginning. There was no delirium worth noticing, only one or two patients wandering in thought a little at night. The hearing of several patients was temporarily dulled while in bed. Nosebleed occurred in several cases at the onset of the disease. Rose spots were observed in all but three cases. They came in successive crops, and were very well marked even in the little boy, aged 3 years, who for five days had from two to three spots, old and new, upon the abdomen. The abdominal walls in all twelve cases were usually natural to sight and touch; tympanitic tendencies, as well as gurgling and pain in the right iliac fossa, being found only for a short time in two or three cases. There was a strong odor about the bodies of several of the patients, suggestive of intestinal fever. The bowels were not decidedly loose nor costive. In only a few instances were characteristic typhoid stools observed. Enlargement of the spleen so that it reached beyond the ribs was evident in only one or two cases. The following conclusions were drawn: That children often bear high temperatures well in this disease; that full baths should be very carefully and judiciously applied, if at all; that the disease in children under 5 years of age may easily be mistaken for other digestive disorders or for bronchitis; that albuminuria coming on during the fever does not necessarily lessen the chances of recovery; that gangrene of the mouth, if superficial, may in some cases be cured by permanganate of potassium washes, without caustics."

Prevention of Measles.—Dr. F. J. Waldo, the Medical Officer of Health in the St. George's, Southwark, London, district advises the use of more strenuous measures for the prevention of measles. He writes: "Medical science has not discovered any means of special protection against measles. Judging from the signs of the times, however, it seems not unlikely that some means of conferring in unity against the disease may be attained in the near future. Such a discovery, by striking at the root of the evil, would do much to lighten the labors of the sanitary reformer." The foregoing passage was written in 1890, and three years later we find the following important counter statements from Dr. Armstong, of Newcastle, a leading authority in all health matters. In his 1892 report he writes: "By early knowledge of first cases in an outbreak we shall be enabled to check the spread of measles and whooping cough in schools, by preventing children of infected houses from attending school. Cases of measles would, wherever possible, be removed to hospital. The fact that measles is infective during the pre-eruptive period is no argument against the necessity for taking active preventive measures for the three or four weeks following, during which time infection still continues. The magnitude of the existing epidemics of measles and whooping cough and possible expense incurred in notifying those diseases in future, is surely no reason for turning our backs on this most important subject. The same argument would have applied with equal force to scarlet fever, smallpox, and typhus fever in 1882, when the question of notification was under your consideration. That argument, if it had been admitted, and acted on then, might perhaps have prevented the reduction of the mortality from smallpox to nil; that from scarlet fever to about one-fourth; and that from typhus to one-eighth of their magnitude; . . . which has followed the notification of these diseases in Newcastle." In conclusion, it is not too much to say of measles and its death toll that the question is one of national importance. Its satisfactory solution is one of the great problems of latter-day preventive medicine. Whether it is to be let alone, as heretofore, or to be

dealt with in a manner worthy of this scientific and progressive age, must to a great extent be decided by the verdict of educated public opinion. Experience has shown again and again that the health reformer can not travel far beyond the popular standard of enlightenment in these matters. That general rule holds good even in a matter so closely affecting the common welfare as the control of measles, one of the most deadly of the preventable diseases that devastate the populace of Great Britain. See the *Sanitary Record*, London, July 24, 1896.

Excessive Mortality by Measles.—The *Medical Press and Circular*, in its editorial columns, emphasizes the fact that measles is not a trivial disease, but on the contrary is the disease first, after tuberculosis, demanding the attention of the sanitarian. The editor says: "Among the preventable causes that swell the mortality rates, and are at present practically unchecked, measles and whoopingcough take the foremost place. The question of the prevention of measles has been discussed in the current number of the *Nineteenth Century* by Drs. Waldo and Walsh. They estimate that the case mortality from the disease in a poor district of the metropolis averages about thrice that of a rich quarter. They point out that in 1894 measles headed the zymotic death rate in London with 3,293 deaths, as against 2,670 due to diphtheria, and 2,097 to whoopingcough. But their chief emphasis is laid on the remarkable statistic deduction that during the year mentioned measles killed in the metropolis nearly twice as many persons as scarlet fever, fevers generally (including typhoid) and smallpox put together. In considering whether or no the disease should be made notifiable they pertinently remark: 'The wisdom and necessity of these (preventive) measures have been admitted in the case of smallpox, of diphtheria, of scarlet fever and other specific fevers, and of erysipelas. It seems illogical to exclude measles, which has been shown to cause a greater mortality than any of the diseases named. . . . Why it should be right to notify and control, or attempt to control, diphtheria, while measles and whoopingcough are left untouched, is somewhat of a mystery.' About the main facts advanced in this timely article there can be no dispute, any difference that may arise will be on the main conclusion that measles should be added to the list of notifiable diseases. As to this important question, it may be broadly stated that if it is the duty of the legislature to endeavor to prevent the loss of life by preventable causes, such as scarlatina and smallpox, it is difficult to see why a similar obligation should not apply to measles and whoopingcough. The cost of preventive measures in the case of measles would be, on the face of it, enormous. An outlay of this kind, however, many economists regard simply in the light of a national insurance. So far as the people who die and the folks who pay the direct and indirect costs of sickness are concerned, it matters not one jot whether the destroyer comes in the shape of cholera or smallpox, or the more homely, but far more fatal, measles. Whatever views be taken upon the advisability of notification, every one must agree with the concluding remarks of the authors above quoted. 'In conclusion,' they write, 'it is not too much to say of measles and its death toll that the question is one of national importance. Whether it is to be let alone as heretofore or to be dealt with in a manner worthy of this scientific and progressive age, must to a great extent be decided by the verdict of the educated public opinion. Experience has shown again and again that the health reformer can not travel far beyond the popular standard of enlightenment in these matters. That general rule holds good even in a matter so closely affecting the common welfare as the control of measles, one of the most deadly of the preventable diseases that devastate the populace of Great Britain.' "

Disinfection Difficulties at Cairo.—According to the London *Lancet*, Cairo and Alexandria with their hopelessly ignorant public, a virulent epidemic and a government not habitually accustomed to repressive acts at variance with the habits of the people, have all the elements necessary to hamper the work of sanitary officials. The first instance of rebellion was an attack in Alexandria upon a cholera ambulance wagon, and a free fight at old Cairo between an Italian disinfector and a hostile mob. Fortunately, the native court of justice sentenced six men to prison for periods varying from two to six months for this attack. Then came the revolution of about 500 Syrian students in the crowded and very sacred university of El Azhar with its 12,000 graduates, of all ages from early manhood to gray old age. A Syrian from this turbulent section was attacked by cholera and removed to hospital, where he shortly died. The old myth was at once started that the doctors had poisoned him, and when a second case occurred the doctor was not allowed to remove him. The sheikhs of the mosque were all absent, and refused to come when invited by the police to quell the riot. Both doctors and police seem to have behaved with the greatest moderation, and fortunately they were all Mussulmans, but when they found that the governor, who very pluckily went alone to expostulate with the rioters, was severely stoned, it was obviously time to put an end to the disturbance. Coles Pasha arrived with twenty picked men with loaded rifles and vainly essayed to open the mosque door, exposed to a storm of paving-stones from the windows of the precincts. He got the door slightly ajar and then fired into the mosque over the heads of the crowd. This was answered by yells and stones, and reluctantly the order was given to fire at the crowd. This produced an immediate dispersal and the Syrians flew to their bedrooms to hide. The police dragged them out, arrested about 500, and marched them at once to prison. The next day the bulk of them were released, sixty-five are now being exiled, and fifteen are going to be brought to justice. The Khedive has, moreover, decided to close the Syrian section of the university for one year. The greatest credit is due to both Coles Pasha and the governor for a successful ending of a very dangerous episode, and they have both been publicly thanked by the Egyptian government. Since that day there has been no interference with sanitary officers in Cairo. "In order to make thoroughly understood the serious and regrettable side of this incident, we must remind readers that the theological university of El Azhar is the most renowned in all the East—for the pious a Rome and Jerusalem combined. A hundred years ago no Christian was allowed even to pass before its door, and one of the most hated incidents of the hated French occupation of this country was that Bonaparte converted the mosque into a temporary stable. It is difficult to believe that we shall not hear of this incident again. A very widespread belief is, unfortunately, current in both Cairo and the provinces that low-class Europeans are going about with sweetmeats to poison the faithful, and that this instead of cholera is the real cause of the epidemic. One despairs of finding any method to counteract an unfounded belief of this kind. With the exception of the English workers nearly all sanitary officers are Mohammedans, and the greatest care is being taken to avoid offending any religious feelings."

Health Report.—The following reports of mortality from smallpox, yellow fever and cholera have been received in the office of the Supervising Surgeon-General U. S. Marine-Hospital Service:

SMALLPOX—UNITED STATES.

Tennessee, July 1 to 31, 13 cases, 2 deaths.

SMALLPOX—FOREIGN.

Alexandria, Egypt, June 11 to 17, 3 deaths.
Bombay, India, July 21 to 28, 4 deaths.
Cairo, Egypt, June 11 to 17, 6 deaths.
Guautanamo, Cuba, July 1 to 31, 43 deaths.
Licata, Italy, August 1 to 8, 3 deaths.
Liverpool, England, August 8 to 15, 1 case.
London, England, August 8 to 15, 2 cases.

Madras, India, July 17 to 24, 1 death.
Madrid, Spain, August 4 to 11, 28 deaths.
Nantes, France, July 1 to 31, 2 cases.
Naples, Italy, August 1 to 8, 8 cases, 5 deaths.
Odessa, Russia, August 1 to 8, 18 cases, 2 deaths.
Osako and Hiogo, Japan, July 11 to 26, 78 cases, 25 deaths.
Paris, France, August 1 to 8, 1 death.
Pernambuco, Brazil, August 4 to 18, 362 cases, 58 deaths.
Prague, Bohemia, July 31 to August 7, 4 cases.
Rio de Janeiro, Brazil, July 18 to August 1, 27 cases, 4 deaths.
St. Petersburg, Russia, August 1 to 8, 7 cases, 1 death.
Tuxpan, Mexico, August 1 to 8, 1 death.
Warsaw, Russia, July 25 to August 8, 7 deaths.

CHOLERA.

Alexandria, Egypt, June 11 to 17, 16 deaths.
Bombay, India, July 21 to 28, 17 deaths.
Cairo, Egypt, June 11 to 17, 91 deaths.
Calcutta, India, July 11 to 18, 10 deaths.

YELLOW FEVER.

Fort de France, Martinique, W. I., August 3 to 6, 2 deaths.
Guautanamo, Cuba, July 1 to 31, 13 deaths.
Matanzas, Cuba, August 12 to 19, 29 deaths.
Manzanillo, Cuba, July 15 to 31, 8 deaths.
Sagua la Grande, Cuba, August 8 to 15, 85 cases, 11 deaths.
Vera Cruz, Mexico, August 13 to 20, 3 cases.
Rio de Janeiro, Brazil, July 18 to August 1, 8 deaths.

NEW INSTRUMENTS.

A NEW SUTURE NEEDLE. MODIFICATION OF THE HAGEDORN.

BY J. A. DIBRELL, JR., M.D.
PROFESSOR OF ANATOMY, ARKANSAS INDUSTRIAL UNIVERSITY, LITTLE ROCK, ARKANSAS.

A great number of forceps have been devised during the last few years. The almost endless variety seem to have grown largely out of attempts to adapt them for the use of both the

The above cut illustrates the modified needle as correctly made for me by Tiemann & Co., of New York City.

ordinary and Hagedorn suture needles. But in this respect all of them seem to be, to a great extent, failures. The transverse and oblique grooves in forceps for the flat Hagedorn needle, require both of one's hands for its accurate adjustment, and when this is done, the needle generally turns or rolls much to the annoyance of the surgeon. I have endeavored to obviate this difficulty and the necessity for so many needle forceps, in changing somewhat the form of the Hagedorn needle, which many surgeons prefer to all others, and at the same time I think, without impairing its usefulness, so that it may be used in almost any holder.

Simple as is the change in its form, I have had much trouble in getting it properly made, and then only after numerous trials by instrument makers in this country, and by one in Vienna.

The needle has given satisfaction in my own work, and to professional friends who have used it.

I have persisted in having it made for this reason, and because I have been informed on extended inquiry that no needle like it had been made, or is to be found in the market.

It has the Hagedorn point, but unlike that needle, is not "curved on the edge," but is flattened in the antero-posterior direction like the ordinary suture needle, from near the point to, and beyond the eye, which is in the same direction, and not on the side, as in the Hagedorn.

This flattened surface on the shaft, enables one to seize the needle firmly at any place, except near the point and at the eye.

The cutting point being exactly like the Hagedorn, the wound made with it is the same, and is not altered in form by the non-cutting portion of the needle behind the point. It also appears to penetrate the tissues with as much ease as the Hagedorn.

The needle can be made in any of the usual sizes or curves.

Most of the needles sent me by the instrument makers, for approval, were entirely too heavy, contained too much metal, with the cutting points unnecessarily large, and the eyes too small.

NECROLOGY.

WILLIAM R. CAMPBELL, M.D. (Starling Medical College, Columbus, Ohio, 1863), at Vanceburg, Ky., of rheumatism, August 19, aged 58 years. He served as a soldier during the civil war.

LUCINDA KEY, M.D., one of the leading women of the colored race and the second woman graduate of the Tennessee Medical College, at Shelbyville, Tenn., August 27. She was a successful practicing physician of Chattanooga.

THOMAS KILLOUGH, M.D. (Northwestern University Medical School, Chicago, 1873), at Hanover, Ill., August 25.

PROFESSOR PAJOT of Paris, aged 80; retired ten years ago. Founder of the *Annales de Gynécologie* and the first president of the Société d'Obstétrique et de Gynécologie.

J. C. WORTHINGTON, Surgeon, U. S. A., long stationed at Fort Thomas, Newport, Ky, died at Louisville, August 11. He was in strong affiliation with the profession of the neighboring cities and left a large circle of friends.

ARGYLE MACKEY, M.D., of Washington, D. C., at the City Hospital, Baltimore, Md., August 28, from a self-inflicted pistol-shot wound. To the physicians he explained most minutely the character of his wound and the causes that were leading to his demise. He even tried to feel his own fluttering pulse. He repeatedly felt the tips of his fingers and noted the slowly decreasing power of circulation and the peculiar sensations of approaching death. He was as calm as if he had been one of the professors of the hospital delivering a clinic lecture at the bedside of a dying patient. He graduated from the University of Maryland School of Medicine, Baltimore, in 1890.

GEORGE D. HOLSTEN, M.D., at New York, August 21. Dr. Holsten was born in New York in 1857, entered the University of New York in 1879, and was graduated in 1882. Subsequently he became a specialist in dermatology, and won much success in his chosen line of work. He was president of the Brooklyn Dermatological Society and editor of a paper devoted to the interests of the science. Dr. Holsten was at different times connected with the Eastern District and Brooklyn Throat Hospitals. He was also a member of the Long Island Medical Society, Alumni Association and Amphion Musical Society.

E. M. NELL, M.D., warden at the State penitentiary at Frankfort, Ky., at that place August 21, aged 49 years. He had been ill about three weeks with typhoid fever. He was born in Adair county near Gradyville and received his early education in the common schools. At the age of 17 he entered the Union Army, serving about two years in the Thirteenth Kentucky Cavalry. He graduated at the Nashville Medical College, and soon had a large practice. He entered politics in 1885, when he was elected as representative. When he was appointed as warden of the State penitentiary he was serving his first term as State senator. Dr. Nell in the short time he was warden had made many friends at the capital, and proved himself extremely efficient as an official.

ELSWORTH F. SMITH, M.D., of St. Louis, Mo., at Fort Missoula, Mont., August 19. Dr. Smith was born in St. Louis

seventy-three years ago. His early education was obtained in a college in St. Charles County, Mo., from which he graduated and went to St. Louis. In that city he entered the St. Louis University, and, after graduating, attended the St. Louis Medical College, from which he graduated in 1848. He went abroad to complete his medical education, and spent four years in Paris. On his return to St. Louis he began the practice of medicine. Through the smallpox and cholera siege he manifested great courage and indomitable perseverance, and won golden opinions from hosts of grateful citizens. In 1852 he received the appointment as health officer, and four years later was offered and accepted the chair of physiology in the St. Louis Medical College, which he held until 1870. He was a member of the AMERICAN MEDICAL ASSOCIATION, St. Louis and City Hospital Medical Societies.

JACOB ROSENTHAL, M.D., of Chicago, after an operation for appendicitis, August 24. Dr. Rosenthal was born at Philadelphia, Dec. 7, 1862, the third son of Morris and Jenetha Rosenthal. He received his education at the public schools of Philadelphia, graduating with highest honors from the Central High School in the class of 1878, being of the few awarded the teacher's certificate for high average. In 1882 he received the degree of M.A. while a student of the Jefferson Medical College, Philadelphia, from whence he graduated with honors in 1888. After graduation he began practicing medicine in Chicago, and in 1891 stopped practice to take up special courses of study in gynecology and obstetrics, spending considerable time at various universities of Germany and Austria, especially with Leopold of Dresden. He returned in 1893 and renewed his practice in Chicago. Dr. Rosenthal was a member of several medical societies and fraternal organizations. He was attending gynecologist at the Cook County Hospital, advisory surgeon of the Standard Accident Association of Detroit, physician to the Hebrew Charities and attending physician at the Jewish Orphans' Home. He has written extensively for medical journals here and abroad, and was generally beloved by his colleagues in the profession. A host of friends mourn his loss.

BOOK NOTICES.

Proceedings of the Nebraska State Medical Society. Twenty-eighth Annual Session, 1896. Pp. 344, cl. Published by the Society.

It contains thirty-five carefully prepared and interesting articles, and is embellished by the portrait of J. E. Summers, Jr., M.D., President of the Society for 1895-96.

Transactions of the American Academy of Railway Surgeons. Annual Meeting, 1895. Vol. II. Edited by R. HARVEY REED, M.D., Columbus, Ohio. Pp. 221, cl. American Medical Association Press. 1896.

President C. K. Cole, in his address, congratulates his associates on the evidences of the success attained by the Academy in the short period of one year. There are nineteen carefully written articles on injuries, sanitation and medico-legal subjects. It contains numerous fine illustrations, including portraits of the officers of the Association and views of the Plant System hospital car.

Eleventh Annual Report OF THE STATE BOARD OF HEALTH AND VITAL STATISTICS OF THE COMMONWEALTH OF PENNSYLVANIA, 1895. Pp. 729, cl. Printed by Clarence M. Bush, State Printer. 1896.

President of the Board, Pemberton Dudley, M.D.; Secretary, Benjamin Lee, M.D., Philadelphia. It contains the report of the Secretary, minutes of the meetings of the Board, reports of inspections, quarantine, disinfections and epidemics; reports of conferences and conventions; circulars and forms in use; organization, by-laws and regulations of the Board; laws of the State relating to the protection of life and health, passed in 1895, etc. It is illustrated with numerous drawings showing drainage and water supply of various towns, maps prepared by the State Weather Service showing mean temperature, rainfall and prevailing direction of the wind for each month, plans of the hospital for contagious diseases at Harrisburg, etc.

SOCIETY NEWS.

Pennsylvania and Maryland Union Medical Association.—The ninth annual reunion took place at York, Pa., August 27. The following officers were elected: President, Dr. Joseph Price, Philadelphia; vice-presidents, Drs. C. A. Rahter, Harrisburg; Charles G. Hill, Baltimore; secretary and treasurer, Roland Jessop, York.

Sheboygan County (Wis.) Medical Society.—The annual meeting was held August 24 at Sheboygan Falls. Dr. H. Reineking of Sheboygan read a paper on aseptic surgery, and there was a general discussion on tuberculosis. The officers elected for the ensuing year were: President, C. W. Pfeifer; vice-president, Charles Schaper; secretary and treasurer, O. B. Bock. The next meeting will be held at Plymouth.

Society of Doctors and Lawyers.—The Medical League Society of Indiana was organized August 28 at Indianapolis by a number of physicians and attorneys from various sections of the State. The object is mutual interest and the avoidance of friction between the two professions in the giving of expert testimony. Major C. L. Holstein of Indianapolis was elected president; Dr. J. F. Hibbard of Richmond, Judge Cyrus F. McNutt of Terre Haute, Dr. G. W. McCasky of Fort Wayne, John B. Cockrum and Dr. M. V. B. Newcomb of Indianapolis, vice-presidents; Dr. J. F. Hodges, Anderson, secretary; Dr. A. E. Sterne, Indianapolis, treasurer, and John B. Elam, Indianapolis, heads the executive committee. A committee reported constitution and by-laws, which will be still further revised at a meeting to be held in Indianapolis the first Tuesday in December.

Tansportation Arrangements for the Pan-American Medical Congress.—Dr. H. L. E. Johnson, 1400 L Street N.W., Washington, D. C., has been elected chairman of the Special Committee on Transportation. All communications relative to rates, reservation in the special trains, etc., should be addressed to him. A rate of one fare for the round trip has been secured between St. Louis, New Orleans and trans-Mississippi points and the City of Mexico. It is confidently expected that this rate will be extended over the entire territory of the United States. Arrangements are in progress for a splendidly equipped special train of sleeping and observation cars, with first-class dining-car service. Dr. Johnson will presently be in position to announce a rate which will include railroad fare, sleeping and dining car service both ways and in the City of Mexico, and covering the expense of various side trips to the most important historic points in the Republic. Charles A. L. Reed, M.D., Secretary International Executive Committee.

American Association of Obstetricians and Gynecologists.—The ninth annual meeting of this association will be held at Richmond, Va., Sept. 22-24, 1896. The following papers will be read: "Principles and Progress in Gynecology," president's address, Joseph Price, Philadelphia; "Vaginal Hysterectomy by the Clamp Method," Sherwood Dunn, Los Angeles; "Further Experience with Appendicitis," A. Van der Veer, Albany; "Relation of Malignant Disease of the Adnexa to Primary Invasion of the Uterus," A. P. Clarke, Cambridge; "Treatment of Puerperal Septicemia," H. W. Longyear, Detroit; "Treatment of Posterior Presentation of the Vertex," E. P. Bernardy, Philadelphia; "Relation of Local Visceral Disorders to the Delusions and Hallucinations of the Insane," W. P. Manton, Detroit; "Differential Diagnosis of Hemorrhage, Shock and Sepsis," Eugene Boise, Grand Rapids; "Movable

Kidney; Local and Remote Results," A. H. Cordier, Kansas City; "Pathology and Indications for Active Surgical Treatment in Contusions of the Abdomen," W. G. Macdonald, Albany; "Some Causes of Insanity in Women," George H. Rohé, Sykesville; "Shall Hysterectomy be Performed in Inflammatory Diseases of the Appendages," L. H. Dunning, Indianapolis; "Dynamic Ileus; with report of cases," J. W. Long, Richmond; "Faradic Treatment of Uterine Inertia and Subinvolution," Charles Stover, Amsterdam; "A Plea for Absorbable Ligatures," H. E. Hayd, Buffalo: "Treament of the Stump," J. F. Baldwin, Columbus; "Limitations in the Teaching of Obstetrics and Gynecology as Determined by State Medical Examining Boards," William Warren Potter, Buffalo; "The Philosophy of Drainage; Treatment of the Pedicle in Hysterectomy or Hystero-myomectomy in the Abdominal Method," George F. Hulbert, St. Louis; "Removal of the Uterine Appendages for Epilepsy and Insanity; a Plea for its more General Adoption," D. Tod Gilliam, Columbus; "Albuminuria of Pregnancy," A. Fr. Eklund, Stockholm; "Unnecessary and Unnatural Fixation of the Uterus and its Results," James F. W. Ross, Toronto; "Sarcoma of the Urethra," Charles A. L. Reed, Cincinnati; "Appendicitis as a Complication in Suppurative Inflammation of the Uterine Appendages, L. S. McMurtry, Louisville; "Gunshot Wounds of the Abdomen with the New Gun," J. D. Griffith, Kansas City; "Tubo-ovarian Cysts with Interesting Cases," A. Goldspohn, Chicago; "Obstruction of the Bowels Following Abdominal Section," George S. Peck, Youngstown; "Memorial of Dr. Hiram Corsen," Fraill Green, Easton.

Papers are also promised by John Milton Duff, Pittsburg; Rufus B. Hall, Cincinnati; George Ben Johnston, Richmond; Walter B. Chase, Brooklyn; Lawson Tait, Birmingham; Walter B. Dorsett, St. Louis; W. E. B. Davis, Birmingham; E. Arnold Praeger, Los Angeles. Dr. George Ben Johnston, 407 E. Grace street, Richmond, Va., is chairman of the Committee of Arrangements, who should be addressed in regard to hotel accommodations and railway fares. Joseph Price, president; William Warren Potter, secretary.

MISCELLANY.

Appointment.—Dr. S. S. Bond of Washington, D. C., was selected as surgeon general of the Union Veterans' Union, at its meeting held in Binghamton, N. Y., August 20.

The House of Mercy Hospital, Springfield, Mo., has received a handsome gift from Garratt Barry, for the equipment of a surgical ward of five beds. The ward will be for men, for general operations.

Fruit Seeds in Appendicitis.—Only two fruit seeds were found in the appendix in the course of 200 operations by Roux for appendicitis. Sixty-five calculi of fecal origin and concentric formation were found, their peculiar shape showing that they had developed in the appendix.—*Cbl. f. Chir.*, August 1.

Infection by Pets.—Cats have been suspected of conveying the infection of diphtheria, and scarlet fever has been traced to them. To this may be added the unwelcome news that a health officer has reported a case of smallpox which has been brought about in the same way; that is to say, by a cat from an infected house entering a neighbor's.—*Pop. Science*, September.

A Vegetable Meat.—In Japan they have what may be called vegetable meat. The substance is called in the vernacular "*torfu*." It consists mainly of protein matter of the soya bean, and is claimed to be easily digestible and as nutritious as meat. *Torfu* is as white as snow and is sold in tablets; it tastes somewhat like fresh malt.—*Popular Science*, September.

St. **Margaret's Memorial Hospital, Pittsburg, Pa.**—Ground was broken August 25. The buildings which will form the hospital are located on Forty-sixth street, between Lawrence and Davidson streets. The front elevation will be 350 feet and the depth 100 feet. The cost $200,000. The hospital was provided for in the will of John H. Shoenberger. It is to be a memorial for his wife.

Unusual Case of Syphilitic Infection.—The *Annales de Derm. et de Syph.*, July, describes a case of syphilitic infection which, starting from the initial chancre, produced in turn pleurisy, icterus, phlebitis, acute rheumatism and dermoneuropathy, all in the course of four months, and only yielding to mercurial treatment.

Elect the Doctors.—The profession throughout the State should see to it that every physician who is a candidate for the next legislature is elected this fall. Dr. Yett, the nominee for the senate, and Dr. Hill, nominee for the house, from the Austin district, will be elected without doubt.—*Texas Medical News.*

Dittel's Method of Elastic Ligatures of Hemorrhoidal Nodules.—The *Wiener Med. Presse*, No. 20, reports the invariable success of this method in 269 cases treated. Average length of treatment, twelve days. The nodules dropped off with the ligatures in five to twelve days. If the surrounding skin can be left out of the ligatures, the pain is slight, otherwise local anesthesia may be required.—*Cbl. f. Chir.*, August 1.

A New Parasite.—A gentleman residing in a comfortable country home in France, exceptionally careful of his person, has been infested with a parasite since his return from a short trip in 1891. It seem to belong to the genus *seira*, but is not identical with any of the species described in the text-books. It does not produce any lesions of the skin, but merely annoys by its presence in the hair and by crawling around on the neck and body. It disappears in the winter, but reappears each spring in spite of the most determined efforts to exterminate the pest. It is confined to the gentleman himself, the servants being almost completely exempt.—*Union Médicale*, August 1.

The Asiatic Ant a Surgical Adjunct.—According to the *Independent*, Dr. Miltiades Issigonis, of Smyrna, a Greek naturalist, has sent a paper to the Linnean Society of London, on a remarkable use of ants in Asia Minor. It was stated that the Greek barber-surgeons of the Levant employed a large species of ant (camponotus) for the purpose of holding together the edges of an incised wound. The ant, held with a forceps, opens its mandibles wide, and being then allowed to seize the edges of the cut, which are held together for the purpose, as soon as a firm grip is obtained the head is severed from the body. The author had seen natives with wounds in course of healing with the aid of seven or eight ants' heads.

Treatment of Malignant Tumors with Toxins of Erysipelas and Prodigiosus.—Dr. William B. Coley has reported 160 cases treated, extending over a period of four year: Total number of cases of sarcoma were 93; carcinoma and epithelioma 62; sarcoma or carcinoma 10; tubercular 2; fibro-angioma 1; mycosis fungoides 1; goitre 2; keloid 1. Of the cases of sarcoma nearly one-half showed more or less improvement; the variety that showed the greatest improvement was the spindle-celled; the melanotic showed the least. Next in order of benefit was the mixed celled—round and spindle; then round-celled, while osteo-sarcoma closely approached the melanotic in showing but little change. In a series of nine cases of melanotic sarcoma no improvement was noticed in six; very slight in three. Most of the cases of osteo-sarcoma failed to respond to the treatment; many showed slight improvement, and one case, a very large osteo-chondro-sarcoma of the ilium, apparently disappeared and the patient remained well for nearly a year, when a recurrence occurred. One case of round-celled sarcoma of the neck of very rapid growth showed very marked decrease during the first week's treatment, after which

time it continued to grow in spite of large doses of the toxins. He was of opinion that a series of upward of twenty successful cases of inoperable sarcoma (four of which had remained well upward of two and one-half years), the diagnosis of which had been established beyond question according to accepted methods of diagnosis, ought to be sufficient to demonstrate the real and positive advance that had been made in a field which, up to this time, had been regarded as absolutely hopeless.—*Johns Hopkins Hos. Bul.*, August.

Laughter as a Symptom of Disease.—From Austria comes a curious account of a man suffering from a nervous disease that manifested itself in paroxysms of laughter. The patient, whose case was described before the Psychiatric and Neurological Society of Vienna, was 30 years of age, and had been subject for three years to fits of laughter, which occurred at first every two or three months, gradually increasing in frequency to a dozen or more a day. The attacks occurred especially between 9 P.M. and 6:30 A.M. Some occurred also during the day, however the patient happened to be occupied. In the intervals between the attacks, and immediately before and afterward, the man appeared perfectly well. The attacks commenced with a tickling sensation arising from the toes of the left foot, and the patient would fall to the ground unless he could reach some place to lie down. When this feeling reached the level of the left nipple the patient lost consciousness for a few seconds. Often the patient lay upon his face. The mouth and eyes were closed spasmodically, the eyeballs turned upward; the pupils were dilated and unresponsive to light. At the height of the attack the patient at first smiled, and then laughed aloud without other sign of merriment. The entire attack occupied about two minutes. On two occasions there was protracted loss of consciousness.—*Pop. Science*, September.

Permanent Baths.—The *Journal de Méd.*, August 2, contains a description of the permanent baths at the General Hospital at Vienna, for the treatment of various skin diseases and cases of extensive destruction of the epidermis. The baths are of copper in a thick wooden case, and the patient is kept completely submerged, floating beneath the surface of the water, sitting up or reclining on a covered trellis, which can be raised and lowered at will. He remains in this bath day and night for weeks and months, and is only lifted out to attend to the calls of nature. Some patients were observed who had been in the bath for two years. The temperature of the water is the same as that of the body; medicaments are added as indicated. The functions of the organism do not seem to be affected by this prolonged soaking. The palms and soles swell and wrinkle at first, but the rest of the sound skin is not altered, except in rare cases an eczema is produced on the arms or throat. Where there is great loss of epidermis, as in dermatitis exfoliacea and pemphigus foliaceus, extensive burns and suppurating wounds, the water takes the place of the numerous bandages required, which would fatigue and weaken the patient. It keeps the surface moist and disinfected, and forestalls complications. It also soothes or prevents the pain when the papillæ are exposed. Similar results are obtained in gangrenes, fistulas, syphilis, cutaneous tuberculosis, psoriasis, lichen ruber, pityriasis universalis, ichthyosis, etc. No other means can be compared to the permanent bath in the prompt relief afforded, the rapidity with which the necrosed tissues are thrown off, inflammation, pain and fever subdued and granulation and cicatrization accelerated. Erysipelas is the only skin disease which it does not seem to benefit.

A New Question to be Decided.—According to the *American Law Review*, an action at law is pending in the circuit court of the city of St. Louis, involving a new question of law, which is of importance to the teaching medical profession. The action, it says, was brought by Anita May George, an infant, by her next friend, against Dr. Augustus C. Bernays, a very eminent surgeon of that city. The plaintiff, when two years of age, had swallowed a quantity of concentrated lye, by reason of which the esophagus became closed, so that for four years she received her nourishment through rectal injections and through a fistula established by a successful operation of gastrotomy. The defendant then took the child into his charge and succeeded in opening the esophagus, and enabling her to take her nourishment in the natural way. His principal operations were performed at the Marion-Sims College of Medicine, in the presence of a number of surgeons and medical students, as well as of the mother of the child. And he afterward published a description of these operations, accompanied by a photograph of the child stripped to the waist, showing where the various incisions in her body had been made, and illustrating the printed description given of the operations; but he did not give the name of the child in the pamphlet, using instead false initials. Now the mother of the child has taken it into her head to try to recover heavy damages for the latter, on the ground that the defendant violated her right of privacy in two particulars: 1, in allowing outside parties to witness the surgical operations which he performed upon her; 2, in publishing in the pamphlet in question a description of the operations, together with a photograph of the patient. The result will be awaited with interest, and it is to be hoped that the case will not be allowed to rest until it is finally passed upon by the supreme court of Missouri. Upon the foregoing meager statement of facts it hardly seems possible that it can be anything but a judgment for the defendant. At the same time it will be a decided advantage to have the law on the subject authoritatively laid down.

Experimental Explorative Operations on the Brain.—A series of experiments in cerebral explorations for diagnostic purposes has been recently conducted at the Albert Clinic at Vienna, which are described in detail in the *Cbl. f. Chir.* of August 1. The subjects were dogs, and the instruments used were an improved drill, the point forming an angle of about 100 degrees, 1½ to 2 mm. in diameter, with a gauged guard to prevent its penetrating too far; a double spoon harpoon, closed to a small point or spread apart at will, and the usual Pravaz' needles, harpoons, etc. The object of the experiments was to determine whether and how far it is possible to explore accumulations of fluids in the substance of the brain or under the membranes, without injury to the patient, and also to secure portions of the brain and fluids for histologic investigation, through the smallest possible opening. After narcosis, the skull of the dog was drilled through in several places, and portions of the dura mater and cerebrum brought up by means of the spoon harpoon or needles, curved and straight. The operations were successful in every case; there was no hemorrhage, and the small drill holes in the bones and soft parts healed perfectly without inflammation. None of the dogs showed the slightest symptoms of cerebral disturbance, but were as lively and hungry the next morning and afterward, as if nothing had happened. Those killed later showed that the wounds had healed by first intention in both bone and tissue, and that there had been no bleeding and no adherences. Roser and Braun have asserted that lack of pulsation in the dura mater usually indicates an accumulation of pus or a splinter of bone, under or near it. By means of a small glass tube inserted in the hole drilled, and half filled with water, the pulsations of the dura mater were distinctly perceptible as they were communicated to the water. This effect was also obtained by a closed glass tube, with the upper end drawn out into a delicate glass thread at right angles to the tube, which vibrated with the pulsations of the dura mater.

A Remarkable Operation in Intestinal Surgery; Recovery.—An article headed "The resection of ten feet of the small intestine of a small boy," by Dr. Guiseppe Ruggi, in *Il Policlinico*,

Rome, will attract attention. The patient was a lad of 8 years, who received his injury by being accidentally but violently struck on the abdomen. The abdomen being opened, a loop of intestine was found constricted by a bridle of the omentum. This was divided, and the gut being apparently uninjured, the wound was closed. For a few days the boy did very well, but then all the symptoms of obstruction returned in aggravated form. One week later the wound was reopened and the intestine was found to be stenosed at the point where the constricting band had been divided. The intestine was incised longitudinally for a distance of 6 or 7 centimeters, freeing the stricture, and an anastomosis was effected. For some time after this the child did well, but complained, as he had before the first operation, most bitterly of hunger during night and day, in spite of the facts that large amounts of food were given, in addition to rectal feeding. But in two weeks the meteorism, pain and other signs of intestinal obstruction returned, and it was determined to open once more the abdomen. A large mass of the small intestine was found agglutinated together and adherent to the abdominal wall. On attempting to break down these adhesions it seemed to be effected with comparative ease, but it was soon seen that the freed parts were deprived of their mesenteric attachments. Instead of closing the abdomen as had been done in similar cases, Dr. Ruggi determined to resect the injured part. He removed successively three portions of the gut, the entire length being ten feet, nine inches, until sound gut above and below was reached. The lower incision was six inches from the ileo-cecal valve. The extremities of the intestine were united by silk sutures. There were no bad symptoms after the operation, and within a few days the boy was again crying for food. For three weeks, in spite of many imprudent concessions being made to him, the boy was teasing night and day for something to eat. Gradually, however, the food taken seemed to afford some nourishment, and five weeks after the last operation the child was discharged perfectly well. At the time of the report, fifteen months later, he was in perfect health.

Character of Locality Considered.—The supreme court of Michigan thinks that it may reasonably take judicial notice that a surgeon's skill depends somewhat upon his experience and opportunity for witnessing operations, and it is to be expected that the degree of surgical skill met with in different localities will be affected by these things. However, a man with no skill, or inconsiderable skill, should not shelter himself behind the claim that he is the only practitioner in his neighborhood, and therefore that he is possessed of the ordinary skill required, although shown to possess less than the ordinary skill to be met with in such localities, or, as the books sometimes say, in the general neighborhood. And, recognizing that the character of the locality has an important bearing upon the degree of skill requisite, the court holds in the case Pelky v. Palmer, decided June 2, 1896, that while the instruction of the circuit judge, taken abstractedly, that a physician charged with malpractice was bound to use only such care, skill and diligence as physicians and surgeons in the neighborhood where he resided and practiced, and who were engaged in the same general line of practice, ordinarily have and exercise in like cases, was perhaps not strictly accurate, yet, in view of evidence showing that the physician in question resided in a city where there were other physicians, presumably of average ability, when compared with similar localities, the party suing was not thereby injured so as to entitle him to a reversal of a judgment in favor of the physician. There was also an instruction in this case that the plaintiff could not recover unless he showed, by a preponderance of the evidence, a state of facts from which no other rational conclusion could be drawn that the defendant was unskillful and negligent, which was the proximate cause of producing the result complained of; and that it was not enough to show a state of things equally consistent with unskillfulness and negligence or the absence of them. The latter part of this instruction, the supreme court holds not objectionable; for, where the inferences to be drawn from the facts proved are as consistent with skill and diligence as with unskillfulness, the plaintiff should fail. But it can not properly be said that the plaintiff can not recover where it is possible to draw a rational, or reasonable conclusion other than that of negligence. Therefore, because the language in the first part of this instruction excluded probability, and required too high a degree of proof, the court directed a new trial.

Breaking Up of One of the Hospital Corps Companies, U. S. Army.—One of the results of the recent tour of inspection of Surgeon-General Sternberg among the Western military posts has been the breaking up of the company of instruction at Fort Riley Kas., and the distribution of the men in small detachments at some central post in each of the military departments west of the Missouri River. In 1891 schools or companies of instruction were established at Fort D. A. Russell, Wyo., Fort Riley, Kas., and at Fort Keogh, Mont. The intention was to train men for service in the corps by instructing them in all duties which the non-commissioned officer or private is liable to be called upon to perform, such as nursing, first aid and hospital corps drill, dispensary work, cooking, mess management and the preparation of official papers pertaining to the hospital. The organization proposed for Fort Keogh was not completed, but companies were formed at the two other posts which did excellent educational work and kept at the disposal of the surgeon-general for an emergency a number of men who could be cut loose from their school duties until the emergency was passed. During the railroad strikes of 1893 men were detailed from these schools for duty with the troops on active service. Later, a hospital corps company was formed at Washington Barracks as of value in connection with the army medical school recently established in Washington, D. C., and as a suitable center for the distribution of trained men to posts in the Department of the East; and the company at Fort D. A. Russell was permitted to lapse by failing to recruit it. For the past two years the centers of Hospital Corps education have therefore been Fort Riley and Washington Barracks. The great objection to the continuance of the former company appears to have been the expense of transporting men from it as a center to posts on the Pacific coast and in the far north. This was so great as practically to debar those distant posts from participation in the benefits to be derived from the system of instruction. By breaking up the company into detachments and attaching these for instruction to the hospital department at certain large posts well scattered over this large territory it is proposed to retain the advantages of the school method and have spare men in each military department available for assignment in emergencies without involving so much expense as heretofore in getting them where they are wanted.

Nurses as Non-Experts.—In the case of American Accident Co. v. Fidler's Administratrix, which was an action on a policy of insurance against death by accident from external causes, the main question was whether the insured died from typhoid fever or whether his death was caused by his body coming in contact with a telephone wire that threw him some ten feet on his back and seriously injured him. The case was twice before the court of appeals of Kentucky, May 12 and June 17, 1896. On the first occasion it reversed a judgment for the plaintiff, because of the admission of testimony of non-experts to prove that the deceased died from the effects of the fall, and not from typhoid fever, as the attending physician and other medical men testified; and on the second a petition for rehearing was overruled. It seems that the widow of the dead man, her sister and mother and also another party were permitted to testify, not only to the symptoms of the patient such

as would necessarily come to their knowledge when nursing him, but from those symptoms, to give it as their opinion that the deceased did not have typhoid fever. They did not pretend to be experts in medical science or to have nursed more than two or three typhoid patients. The symptoms manifested by the patient from day to day and such as one of ordinary observation could detect, the court says, were properly allowed to be detailed by the witnesses and to go to the jury as evidence. And on these statements a hypothetic case could be, as was done in this case, presented to those skilled in the character and treatment of diseases and their opinions given as to the cause of death; but the court holds that these four witnesses mentioned were clearly not entitled to express any opinion on the subject, though it cites the case where the opinion of one who had been a professional nurse for half a century and his familiarity with the disease was unquestioned, was received as entitled to great weight. On the rehearing the court said that the opinion of one having no experience in the science of surgery should have no weight when eminent surgeons are present and have testified that a limb was improperly amputated, or that it was not necessary to save the life of the patient; nor, where the disease is pronounced to be typhoid fever by educated physicians, is it competent to prove by one inexperienced in the treatment of diseases, and who had never made a study of medicine, that the physicians were mistaken.

Water Famine Among the East London Poor.—The water famine in the East End of London has become a great source of complaint. Many children, it is said, have died, others are sick and others are becoming ill owing to the scarcity of water. Few houses are allowed a supply of more than an hour daily, and the water furnished has an unpleasant deposit. The result is that scarlet fever, diphtheria and other diseases caused by uncleanliness have seriously affected the section. While the East End has thus been deprived of water, the fountains in the West End, or fashionable part of London, have been running, thereby wasting water which would most likely have saved the lives of many poor children in the unaristocratic portion of the metropolis, although this must be remembered that the companies that have the water rights in these different sections are not the same.

Medical Longevity.—The London *Lancet* for June 20 states that Dr. Salzmann of Esslingen has recently devoted his attention to determining the average duration of life among members of the medical profession. After an exhaustive examination of all accessible archives referring to the last four centuries, the following are the results arrived at by the zealous antiquarian. The average duration of a medical man's life during the sixteenth century was 36 years, 5 months; in the seventeenth century it was 45 years, 8 months; in the eighteenth century 49 years, 8 months, and in the nineteenth century 56 years, 7 months. It would appear from these data that, whether the survival be of the fittest or not, the duration of medical life has been increasing in a marvelous manner. Should the same rate be maintained practitioners of medicine may ere long all look forward to centennial honors, by no means a rosy prospect from the point of view of the neophyte who, as it is, finds it sufficiently hard to make good his footing within the densely crowded ranks. According to Dr. Salzmann the addition of over twenty years to the average medical lifetime is due to the advance in medical science, preventive and curative; so the ironic apophthegm, "physician, heal thyself," can no longer be launched with any effect. In a speech delivered some time ago the present leader of the House of Commons alluded to the possibility of normal human life becoming extended "to the patriarchal term of 120 years."

Alleged Medical Hardships in Russia.—The London *Lancet* refers to the hard lot of the profession in Russia, and to the many cases of suicide among the physicians in that land. Italy in suicide, as in homicide, maintains a bad pre-eminence, but in professional suicide, in the self-destruction of votaries of the liberal arts, particularly medicine, she would appear to be out-distanced by Russia. From a statistical return lately published, suicide among the practitioners of the healing art in Russia has reached alarming proportions—a distressing feature of the return being the comparative youth of the victims. The majority of them average between 25 and 35 years of age—all of them in the prime of life and full flush of their powers. An explanation of the phenomenon is sought in the fact that the Russian medical man's lot is a particularly hard one. As in Italy the profession is vastly overstocked in all the cities of the empire, and in consequence competition is exceptionally severe—so severe that a physician has been known to hold consultations from 8 A.M. to 11 P.M. in order to gain the reasonable income of 600 rubles a year. Besides the Russian municipalities, seconded by the lay press, have instituted gratuitous consultations in public ambulances, by which the wealthy city of Kiev, for example, withdraws from the legitimate fees of the profession as much as 27,000 rubles per annum. There the poverty of the practitioner is such that he has been known to give advice for 20 kopecks (8d.) for each consultation.

Hippocrates the Founder of an Enduring Ethical System.—It cannot truthfully be said of the Father of Medicine that he is a "back number." On the contrary a perennial bloom graces all his decisions about the medical life. Men may come and men may go, but his wise eloquence flows on forever. The editor of the *Scalpel* enlarges upon this thought as follows: "The Father of Medicine, Hippocrates, has laid down our ethical code for all time. It is the only one we can recognize and have recognized. It over-rides all modern definitions, whether framed by colleges or leading members of the bar. It is not a question of *autres temps autres mœurs*. This old Pagan knew his duty, and his words, sounding along the corridors of time, appeal to us to-day with all their freshness, because at the root of his words there is the one great element which makes all words valuable and vitable, viz., their truth. The practice of medicine in ancient times was much as it is in the present day; human nature has been much the same in all ages, especially where sex is concerned. Hippocrates knew probably just as much as the College of Physicians of London about abortion and about all the secrets connected with it, and not only about abortion but about the thousand and one secrets which are brought under our notice, for the life currents have hardly changed; the same fears are here, the same weaknesses, the same suffering, the same vices, the same repentance, and the physician who hears all the sad stories of human frailty is still the same. We have followed the teaching of Hippocrates and not of modern men and modern manners; we intend to follow it, and we strongly advise all younger members of the profession to read the Hippocratic oath and to adopt it. Hippocrates said: 'I swear whatever in connection with my professional practice or not in connection with it, I see or hear in the life of men which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated may it be granted to me to enjoy life and the practice of the art respected by all men and in all times, but should I trespass and violate this oath may the reverse be my lot.' The word 'men' here is used in the generic sense and also includes women, and the word abroad also admits of definition, for Hippocrates did not say anything of the law which even in his time demanded civic duties of the doctor. In France, Germany and all civilized countries, the professional secret is not only privileged but sacred. In England, with the old school of practitioners, we have been brought up in the same traditions. There may be a younger school, but we hope it is a very limited one, holding different tenets."

Practice of Medicine in West Virginia.—Section 9 of chapter 150 of the code of West Virginia was amended in 1895, so that the following persons, and no others, shall hereafter be permitted to practice medicine in that State, viz.: 1. All such persons as were legally entitled to practice medicine in that State Feb. 22, 1895. 2. All such persons as shall pass an examination before the State board of health and shall receive certificates from such board, as provided. The State board of health, it is further enacted, shall, at such times as a majority of them may deem proper, hold examinations for the licensing of practitioners of medicine. Such examinations shall not be less in number than three during each year and shall be held at such points in the State as shall be most convenient to those presenting themselves for examination or to the State board of health. At such examinations written and oral questions shall be submitted to the applicants for license, covering all the essential branches of the sciences of medicine and surgery, and the examination shall be a thorough and decisive test of the knowledge and ability of the applicants. The president and secretary of the State board of health shall issue certificates to all who successfully pass the said examination, and such certificates, after being duly recorded, shall be deemed licenses to practice medicine and surgery in all their branches in West Virginia. The State board of health shall give timely notice of the time and place of holding each such examination, by publishing such notice in at least three newspapers of general circulation in the State, and all persons wishing to present themselves for examination should notify the secretary of the State board of health to that effect. No applicant for a license to practice medicine in West Virginia shall be rejected because of his or her adherence to any particular school or theory of medicine. The State board of health shall call to their assistance, in the examination of any applicant who professes the homeopathic or eclectic school of medicine, a homeopathic or eclectic physician duly licensed to practice medicine in the State, and such homeopathic or eclectic physicians so called to the assistance of the State board of health, shall be allowed per diem and actual expenses incurred as allowed to regular members of the State board of health; provided, however, that the provisions of this and the preceding section shall not apply to physicians living in other States and duly qualified to practice medicine therein, who shall be called into consultation into West Virginia, by a physician legally entitled to practice medicine in West Virginia under these sections. Section 17 of the same chapter of the code is amended so that all moneys received from the State board of health as fees for examination, under section 11 thereof, shall be placed to the credit of the State board of health by the treasurer of the State, and shall, with other moneys appropriated to the said State board of health, be used to defray the expenses of its meetings, examinations, etc.

Changes in Virginia Health Law.—Sections 1714, 1715, 1717, 1724 and 1725, code of Virginia, were amended and reënacted by an act approved March 3, 1896. The provision, in original section 1714, that the State board of health should not in any way be a charge upon the State, was dropped. Section 1715 had introduced into it a provision that the board shall have power and authority, as further directed, to adopt such rules and regulations, and issue such orders as may be necessary to prevent the spread of contagious or infectious diseases, and to confine persons infected therewith or who may have recently been exposed to the same, within prescribed limits. Section 1717 had the provisions added that the salary of the secretary shall be fixed by the board and that the other members of the board shall receive no salary, but shall be paid the sum of $4 per day while engaged in the discharge of their duties, and their traveling expenses incurred while so employed. The expenses of the State board of health, which shall not in any one year exceed the sum of $2,000, shall be paid by warrants drawn on the auditor of public accounts, signed by the president of said board, and countersigned by the secretary, out of any money in the treasury not otherwise appropriated. Section 1724, as now amended, provides that if any member of the State board of health or a justice of any county shall have complaint, on oath, made to him, or if he shall have reason to think that there is on any lot, tenement, or plantation, or on board any vessel in said county, any person infected with smallpox, or other dangerous disease, it shall be the duty of said member of the board of health, or of said justice to issue a mandate in writing, addressed to two physicians of said county, requiring them to go to the place so suspected and to examine the persons diseased, if any, and to report in writing their opinion of such disease, and whether the public's interests require any action. If it appear to said board of health or said justice from said report that such person or persons are infected with smallpox or other dangerous disease, then said board of health or justice, whichever has first taken cognizance of the case, shall prescribe such rules and regulations as may be deemed necessary to prevent the spread of such disease; but the action of said justice shall be subject to the review of the local board of health, and for this purpose said board of health or justice may establish a quarantine at the place or places where such disease exists, and inhibit any ingress or egress to or from the same. They may, by proper orders, prevent any railroad train, steamboat or other conveyance from taking on or putting off passengers or freight at any point or points in or near the infected district. For the services required of the physicians under this section, a reasonable allowance shall be made to them by the board of supervisors at the next county levy thereafter. Section 1725 is amended, extending power to the State board of health to have infected persons removed to a hospital or other proper place.

Lord Wolseley on the Army Medical Officer.—It may be remembered that six months ago at the close of the 71st session of the Army Medical School, Netley, England, the speech of Adjutant General Sir Redvers Buller to the graduating class created much dissatisfaction in medical circles, civil as well as military, on account of the low place which he gave to the army medical officer in the military hierarchy, defining his duties as those of the doctor merely and overlooking those of the sanitary officer, although speaking under the roof of the medical school and in the presence of the faculty instituted to teach the young officer these very duties. The impressions created by that speech can not but be effaced by the spirit of comradeship evinced by the Commander-in-Chief, Lord Wolseley, in his remarks on distributing the prizes, July 31, at the close of the 72d session. He eulogized the medical department and raised the army medical officer officially and socially to his proper plane. According to a summary in the *Lancet* of August 15: During the course of a long military career he could most conscientiously say that some of the greatest friends he had had in the army had been medical officers. . . . As they (the young officers) went out to their duties he could assure them that they would find that no man appreciated the services of officers—certainly of the medical officers—of the army more thoroughly than the private. He was extremely grateful for every kindness; and he would remind them that no body of men in the army were more capable of doing acts of kindness than the medical officers of Her Majesty's service. When he thought of that building (the Royal Victoria Hospital) he could not help remembering the two men to whom he thought they were mostly indebted for it. He knew them both well and had the greatest admiration for them. He was referring to Dr. Parkes and Sir Thomas Longmore. The name of Dr. Parkes called to his mind the book which he wrote on Hygiene, which when it first appeared created quite a revolu-

tion in that science not only in the medical service but throughout the various parts of Her Majesty's dominions. It was their duty not only to heal disease, but to do their best to prevent it, and Dr. Parkes was the first man to show them how disease might be kept away from their barracks. Dr. Parkes had passed away from them, but his memory would always be fresh in the minds of those studying there, and his name would be remembered in the army so long as the hospital continued to exist. Members of their profession had not only been distinguished for their medical services. He had on many occasions seen some of the greatest acts of heroism performed by gentlemen of the department; and if he was asked to name a dozen of the very bravest men he had ever met he should have to include two or three who had been in the medical department. He would name one at once, because he saw him, quite lately. Perhaps they had heard of Sir Robert Jackson. He was with him for a long time; and if he had to lead a storming party to-morrow he did not know any man he would sooner have with him than his friend Dr. Jackson. He went to Lucknow with his regiment, and the senior medical officer of the battalion was equally brave and won the Victoria Cross on the occasion. There were many acts performed by medical officers which deserved to be recorded on any pages of history devoted to heroism. He related the dying act of Surgeon-Major Landon, who, when lingering under what proved to be a fatal gunshot wound, asked the enemy, into whose hands a batch of wounded had fallen in an unfortunate expedition, to prop him up while he injected morphia into a soldier who had been seriously wounded in order to relieve his suffering. After which service he fell back and expired in half an hour. Such an act as that should be talked of and read of in the medical school and should be known throughout the army. In conclusion he begged to wish them the best fortune in the profession in which they had embarked and to hope that he might have during the remaining portion of his life many opportunities of meeting them again.

Gleanings.—Fatal pneumonia immediately following a fall into water; pneumococci must have been inspirated into the lungs with the water. Finkelstein ascribes follicular enteritis to a new bacillus he has discovered. (*Therap. Woch.*, July 25.)——Query whether the "ainhum" of the negroes and some cases of syringomyelia, sclerodactylia, etc., may not be forms of leprosy. Cancer of the stomach arrested and pains and cachexia cured by exposure to the Roentgen ray half an hour, twice a day for a week, supplemented by milk diet, condurango and injections of artificial serum. Absolute cure of congenital incontinence of urine (age 22 years) by inductive static current (Morton's current, six to eight sparks a second) introduced with a bougie into the urethra to the vesical sphincter. (*Sem. Méd.*, July 29.)——Acute appendicitis treated with opium and ice; fifth day the appendix was passed entire in the feces, with evidences of a circular abscess where it had been joined to the intestine; recovery. (*Wratsch*, No. 22.)——Fatal peritonitis; two pins found in appendix. (*Cbl. f. inn. M.* No. 20.) Goitre experimentally produced by water from the beautiful Vale of Aosta, noted for its many cases of endemic goitre. (*Wien. Klin. R.*, July 23.)——Four grave cases of infective disease cured by letting out blood and substituting in its place an equal amount of serum. (*Bull. de l'Acad. d. M.*, July 21.)——Arnheim reports sanoform (di-iodin-salicylic acid methyl ether,) non-toxic and fully as effectual as iodoform; 72 ulcers, etc., treated; used as powder, gauze, salve and collodium. (*Cbl. f. Chir.*, July 11.)——Borger has invented a thyroid gland hook to simplify tracheotomy. (*Zeit. f. prakt. Aerzte*, No. 8.)——As a means to prevent adulterations it is proposed to hang up in a prominent place in an offender's establishment the analysis of the article adulterated, with a notice calling customers' attention to it. (*St. Pet. Med. Woch.*, July 18.)——The healthy skin and vagina do not absorb medicaments added to baths; erythema of the surface must first be produced by chemic or mechanical means before there is absorption. (*Nouveaux Remèdes*, July 18.)——Experimental "washing" of the blood (dogs), leads Bosc and Vedel to conclude that the action of the intravenous injections of 7 per cent. salt solution is by the osmotic action of the NaCl, by the diuretic action of the salt, direct and indirect, and by elevation of the pressure of the blood; it also acts on the red corpuscles, promotes the nutrition of the organism, and diminishes the globulicide power of the pathologic serum; a medium dose injected at the first symptoms of infection promptly cures; large doses resulted fatally; the preventive action of early injections suggests the existence of a superactivity of the organism, revealing itself in reactionary phenomena, already noticed in normal dogs, resembling a natural crisis reaction. (*Bull. Méd.*, July 29.)

THE PUBLIC SERVICES.

Army Changes. Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from Aug. 22 to Aug. 29, 1896.

A board of medical officers to consist of: Col. Dallas Bache, Asst. Surgeon-General; Lieut.-Col. William H. Forwood, Deputy Surgeon-General; Lieut.-Col. David L. Huntington, Deputy Surgeon-General; Major Walter Reed, Surgeon; Capt. Charles M. Gandy, Asst. Surgeon, is constituted to meet at the Army Medical Museum Building on Wednesday, Sept. 23, 1896, at 10 o'clock A.M., for examination of candidates for admission to the Medical Corps of the Army.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for the week ending Aug. 29, 1896.

Medical Director David Kindleberger, placed on the retired list September 2.

Asst. Surgeon H. La Motte, ordered to the naval hospital at Norfolk.

Surgeon C. Biddle, detached from the "Monongahela" and placed on waiting orders.

Medical Inspector J. C. Wise, Surgeons J. C. Byrnes and C. Biddle ordered as a board to convene at Annapolis September 3, to examine candidates for admission to the naval academy.

Change of Address.

Durant, G., from Branford, Conn., to 12 W. 46th St., New York, N. Y.
Earles, W. H., from 655 3d St. to 259 11th St., Milwaukee, Wis.
Fraser, J. N., from 3100 Wentworth Av. to New Era Bldg., Cor. Blue Island Av. and Harrison St., Chicago.
Hagens, G. J., from 6058 S. Halsted St. to 6053 S. Halsted St., Chicago.
Jones, W. A., 630 Walnut St. to 221-222 Spitzer Bldg., Toledo, Ohio.
Kober, G. M., from Winchester, Va. to 1819 Q St., N. W., Washington.
MacDonald, Chas. E., from Liberty Falls to St. John's Hospital, Long Island City, N. Y.
Niles, J. W., from 355 Dearborn Av. to 390 N. Clark St., Chicago.
Penton, A. B., from 275 Harrison St. to 134 Ash St., Detroit, Mich.
Percy, J. F., from Mantorville, Minn., to Galesburg, Ill.
Smith, S. L., from Chicago to Neenah, Wis.
Simpson, Irwin, from Anamosa, Iowa, to 5034 Washington Av., Chicago.
Watts, G. W., from 361 W. 65th St. to "The Yale," Station O, Chicago.

LETTERS RECEIVED.

Atwood Mfg. Co., Amesbury, Mass.; American Medico-Surgical Bulletin, New York; Abbott, W. C., Ravenswood, Ill.; Alma Sanitarium Co., Alma, Mich.; Alexander, H. M. & Co., Marietta, Pa.

Brown, Sanger, Chicago; Bittman, Chas. W., St. Louis, Mo.; Blackwell, Emily, New York; Burr, C. B., Flint, Mich.; Bovee, J. Wesley, Washington, D. C.; Bernd, Henry & Co., St. Louis, Mo.

Cook, T. H. G., Stone, Ala.; Clare, M. W., Eureka, Mo.; Crofut, Martha M. Chicago; Chicago Polyclinic and Hospital, Chicago; Cox, C. C., College Park, Ga.

Davidson Rubber Co., Boston, Mass.; Dewey, Richard (2), Wauwatosa, Wis.; Darling, C. G., Ann Arbor, Mich.; Detroit College of Medicine, Detroit, Mich.; Drevet Manufacturing Co., New York.

Eve, Paul F., Nashville, Tenn.; Earle, T. T., Greenville, S. C.

Freeman, Leonard, Denver, Colo.; Foster, Eugene, Augusta, Ga.; Foltz, G. W., Lima, Ohio.

Graham, H. G., Chicago; Goffe, J. Riddle, New York; Gotham, The Company, New York.

Hall, C. H., Salem, Ore.; Hummel, A. L., Advertising Agency (2), New York; Holland, J. W., Philadelphia, Pa.; Haggard, W. D., Jr., Nashville, Tenn.; Hines, W. Frank, Chestertown, Md.; Holgate, J. R., Allsboro, Ala.; Haldenstein, J. (2), New York.

Jackson, Edward, Philadelphia, Pa.; Just's Food Co., Syracuse, N. Y.

Lea Brothers & Co., Philadelphia, Pa.; Lusk, Z. J., Warsaw, N. Y.; Lehn & Fink, New York.

Marshall, Clara, Philadelphia, Pa.; McLean, R. A., San Francisco, Cal.; Marshall, John, Philadelphia, Pa.; Mudd, H. H. St. Louis, Mo.; Maltine Mfg. Co., New York; MacDonald, J. W., Minneapolis, Minn.; Meany, W. B., St. Louis, Mo.

Nash, A., Joliet, Ill.

Park, J. Walter, Harrisburg, Pa.; Prentiss, Spencer B., Washington, D. C.; Pantagraph Printing & Stationery Co., New York.

Randall & Becton, Boston, Mass.; Reynolds, F. R., Ft. Clark, Texas; Rose, Wm., Columbia, Ill.; Rosenthal, Edwin, Philadelphia, Pa.; Roosa, D. B. St. John, New York; Rogers, H. W., Cleveland, Ohio; Rio Chemical Co., St. Louis, Mo.; Randall, J. N., Decatur, Ill.

Shearer, G. H., Philadelphia, Pa.; Spagl, A., Frankfurt a. M., Germany; Stowell, Chas. H., Washington, D. C.; Seville, F. F., Chicago; Selling, L. M. Agawam, Mass.; Sampson, F. E., Creston, Iowa; Saxlehner, Andreas, New York; Shepard, Chas. H., Brooklyn, N. Y.; Shidler, G. W., York, Neb.

Travis, B. F., Chattanooga, Tenn.; Truax, Chas., Greene & Co., Chicago.

Willson, H. B. & Co., Washington, D. C.; Whelpley, H. M., St. Louis, Mo.; Wathen, W. H., Louisville, Ky.; Wingate, O. U. B., Milwaukee.